# AMERICAN GAS JOURNAL

h YEAR | NOVEMBER, 1947 | VOL. 167, NO. 5



*Putting* **WASTE GAS to USE with CLARK "BIG ANGLES"**

Eleven 6-cylinder Clark "Big Angle" gas-engine-driven compressors totaling 13,200 B.H.P. in Eunice, N. M. compressor station of El Paso Natural Gas Company.

Five 5-cylinder "B Angle" units, totalir 5,000 B.H.P., also in g booster service on the Paso Company's pipe lir

Big jobs are regular assignments for Clark "Big Angles". That's why El Paso Natural Gas Company picked these powerful, compact compressors for their big project of reclaiming, treating and pumping flare gas from Texas to California.

These are installed on that part of the line which gathers all the gas for main line operation. If any of these units in the first station on the line were to go down, the entire system would suffer.

Twenty-one Clark "Big Angle" Compressor units, totaling 23,200 B.H.P., are already in use for gas booster service on El Paso Company pipe line operations. Units totaling more than 24,000 additional B.H.P. are on order.

**CLARK BROS. CO., INC., OLEAN, NEW YORK**

BOSTON · CHICAGO · HOUSTON · LOS ANGELES · NEW YORK · TULSA · WASHINGTON · LONDON
BUCHAREST, RUMANIA · CARACAS, VENEZUELA

**CLARK**

ONE OF THE DRESSER INDUSTRIES

**SETS THE PACE IN COMPRESSOR PROGRESS**

©CIB 108454


# LIQUID PETROLEUM GAS PLANTS

ENGINEERED AND BUILT BY

## Stacey Dresser Engineering

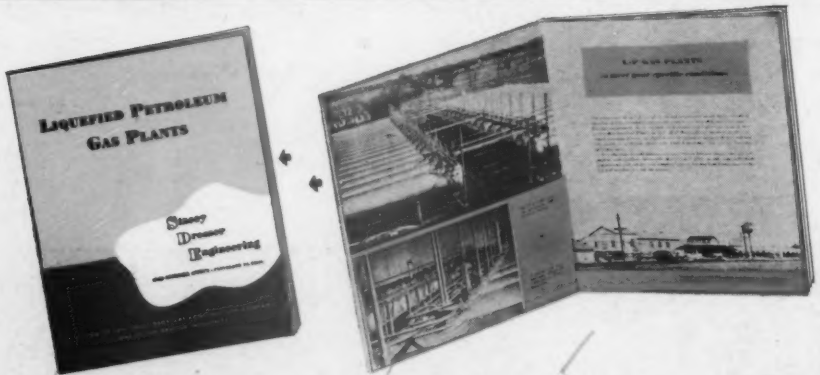
1900 SUPERIOR AVENUE • CLEVELAND 14, OHIO

(ONE OF THE DRESSER INDUSTRIES)

Included among Stacey-Dresser Liquid Petroleum Gas Plant installations are the largest in the world, serving Boston, Cincinnati, Columbus, Detroit, Toledo, to name only the five biggest. There are many more.

Stacey-Dresser's L.P. Gas Plants range in pressure from ¼ to 350 lbs. They are always designed and engineered for the customer's individual, exclusive problem, because this has proved most economical in the long run.

*Such a record is certainly worth investigating, isn't it . . .*




**IT COSTS NOTHING** to have the facts at hand. Write today for this free booklet on L.P. Gas Plants. It contains the why's and wherefore's with technical data and explanations of use to you in preparatory thinking and in discussions about L.P. Gas. Supply limited. Please write today, if interested.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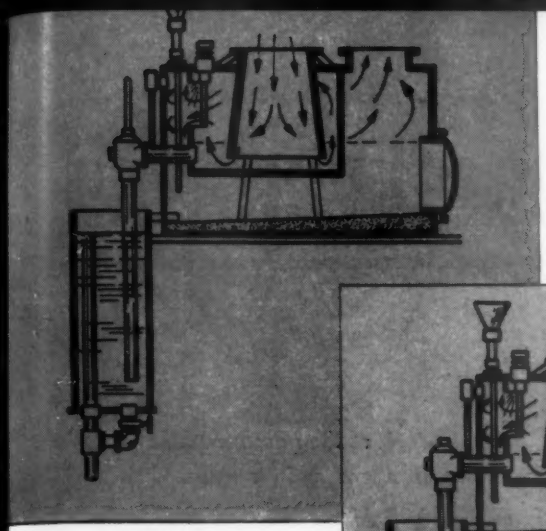
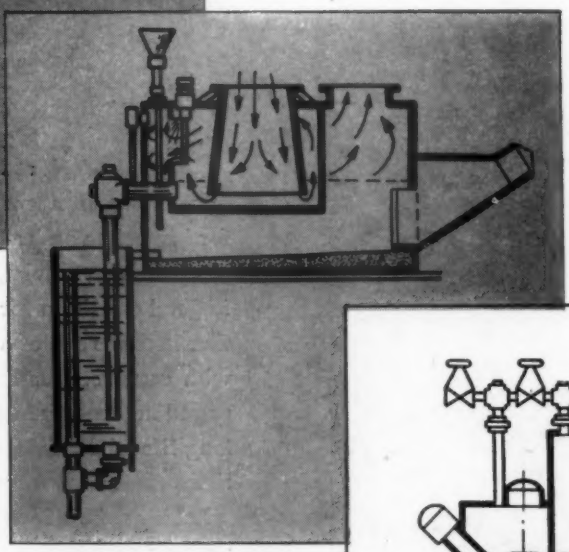
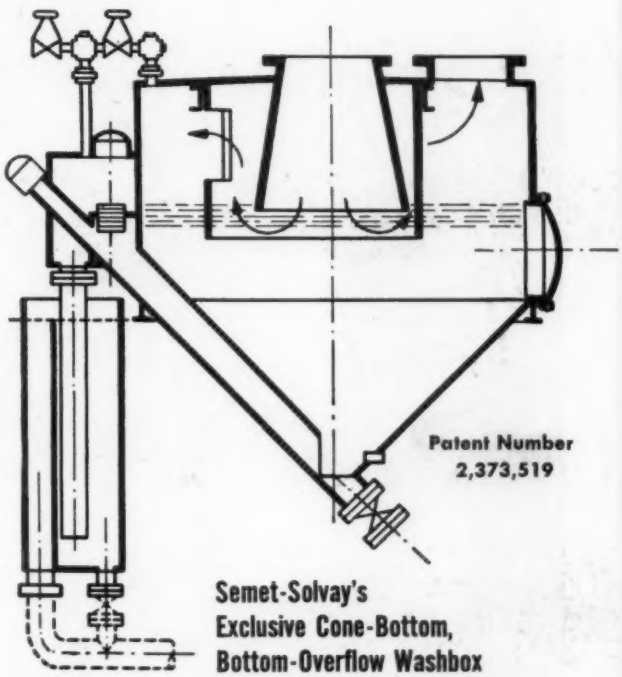
# The Evolution of the Design for the WASHBOX



Original
Inclined-Bottom Washbox



Inclined-Bottom Washbox
with sealed cleanout



Patent Number
2,373,519

Semet-Solvay's
Exclusive Cone-Bottom,
Bottom-Overflow Washbox

Originally, the washbox, notwithstanding its name, was primarily a water seal or automatic one-way valve. It permitted the passage of gases from the machine to the relief holder, yet prevented any reversal of flow. While so doing, it did serve to remove some of the tar vapors and partially saturated the gas.

However, with the advent of bituminous coal as generator fuel and heavy oil for enriching, the scrubbing action of the washbox grew increasingly important. It was necessary to remove greater quantities of heavy tar and other impurities from the gas, until the cleaning action of the washbox has now become of equal importance with its sealing action.

First efforts by Semet-Solvay engineers along this line produced the Semet-Solvay inclined-bottom washbox with sealed cleanout, which permitted the manual withdrawal of this accumulated matter without interruption of operation. While this was a partial answer to the problem, considerable labor was still required.

The modern patented Semet-Solvay cone-bottom, bottom-overflow washbox not only retains all the scrubbing and sealing features of the earlier boxes, but provides a continuous discharge from the bottom of the cone. It will handle, completely automatically, the liquors and tars from the gas from any water gas or blue gas machine without danger of stoppage or accumulation. It is furnished as standard equipment with the Semet-Solvay Reverse Flow Water Gas Machine and can be substituted for any other type box on existing equipment.

**SEMET-SOLVAY** ENGINEERING DIVISION
SEMET-SOLVAY COMPANY
40 RECTOR STREET • NEW YORK 6, NEW YORK

# long-lived and

Don't forget the proved long life of cast iron pipe. This cast iron gas main, laid 109 years ago in Charleston, S. C., is still rendering satisfactory service.

Look at the photograph at left—a cast iron gas main uncovered for inspection on its 100th Anniversary of continuous service, and found to be in good condition for another century. Charleston is one of a number of cities with cast iron gas mains which have passed the century mark in service. The long life of cast iron pipe is not an estimate, but a matter of record.

Look at the photograph at right, a close-up shot of the new standardized mechanical joint. This is the joint, furnished exclusively with cast iron pipe, which many gas utilities are now standardizing on for these reasons—speed and simplicity of joint assembly which means more lengths laid per day by trained or untrained men—but, more importantly, because the new standardized mechanical joint cast iron pipe is *long-lived and bottle-tight* under all normal operating pressures—*and,* is interchangeable as to fittings and accessories supplied by all makers. Cast Iron Pipe Research Association, Thomas F. Wolfe, Research Engineer, Peoples Gas Building, Chicago 3, Ill.

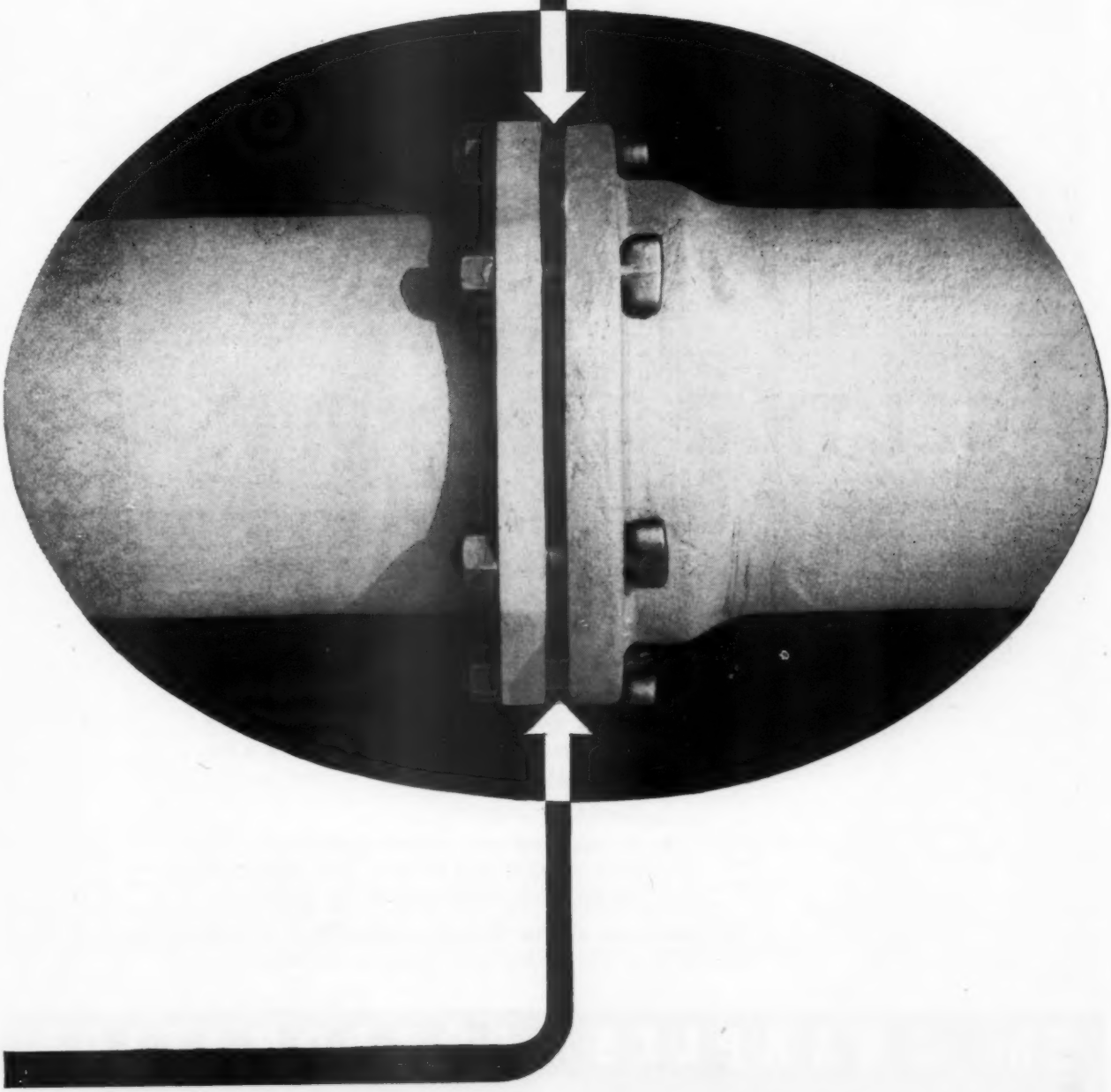
**STANDARDIZE ON . .**

**CAST IRON**

*Standardized* **MECHANICAL JOINT**

**PIPE**

# bottle-tight!



# GET THAT TAR PROBLEM OFF *YOUR* HANDS

Let Sharples engineers take over your tar dehydration problems. The Sharples Centrifugal Dehydration Process assures:

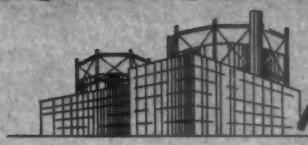
1. Continuous delivery of water gas or coke oven tar at 2% moisture or less.
2. Lower dehydration costs than by any other known method. Total dehydration costs are less than one tenth of a cent per gallon of tar.
3. Reduced still maintenance. . . . 90% of chlorides are eliminated.
4. A high quality tar of low viscosity. . . . No light fractions are removed and conditions conducive to polymerization are eliminated.

The guarantee of The Sharples Corporation is behind this process. It is your assurance of complete satisfaction.

## The SHARPLES CORPORATION

NEW YORK 17, N. Y. 501 Fifth Avenue
CHICAGO 4, ILL. 80 E. Jackson Boulevard
BOSTON 16, MASS. 230 Congress Street
SAN FRANCISCO 5, CALIF. 686 Howard Street
CLEVELAND 15, OHIO 453 Hippodrome Annex Bldg
EXECUTIVE OFFICES AND FACTORY, 2300 WESTMORELAND STREET, PHILADELPHIA 40, PENNA.

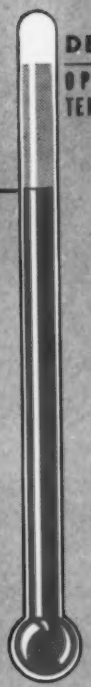
# ARE YOUR PLANT OPERATIONS



# Restricted

## by the Refractories you use now?

PRESENT SAFE OPERATING TEMPERATURE



**Although operating temperatures in water gas generators are seldom too high for the refractories used, other severe conditions present tend to reduce the service life of natural mineral refractories. Much can be gained both in operating efficiency and long lining life by employing a Special Refractory. Such a refractory is the Norton CRYSTOLON line of bricks and shapes which stand the gaff in gas generator operation. Made of silicon carbide plus a minimum of refractory bond, these brick are very dense in the sense of low porosity and permeability, physically strong, chemically stable and highly refractory. They are unaffected by molten coal ash slag because it cannot penetrate their dense surface. CRYSTOLON linings often pay for themselves the first year by savings in cleaning costs alone. They will usually give from 10,000 up to 25,000 hours of trouble-free service . . . depending upon operating conditions.**

**NORTON COMPANY** **WORCESTER 6, MASS.**

Let's
roll up
our sleeves
in '48...

## Gas Refrigeration's New Advertising Portfolio will help you meet the challenge to the Gas Industry

Yes, 1948 is the year of challenge. The Gas Industry—along with every other American company, salesman, and product—has been challenged to produce *more* . . . to sell *more*. For only by increased production and selling can we build a healthy, durable prosperity.

In keeping with the spirit of '48, Servel is producing *more* Gas Refrigerators . . . and will continue to step up production as rapidly as possible. This means you will have more refrigerators to *sell*. Now here's where the challenge directly concerns you. Are you prepared to sell more?

"Easy selling" is coming to an end. There will be keen competition for countless prospects who are *waiting to be sold*. To get your share of this market, you must roll up your sleeves, plan an aggressive local sales program . . . and then put it to work.

That's just what this new Advertising Portfolio will help you do. It offers a complete promotional program . . . planned step by step under one cover:

**Local Advertising Materials**
**Displays and Signs**
**Direct Mail and Literature**
**Retail Salesmen's Aids**
**Home Service Materials**
**Salesman Selection and Training**

These sales weapons not only sell the superiority of Gas Refrigeration, but also *direct customers to your store*. When you receive your portfolio, you will find samples of all your sales aids . . . conveniently arranged in six handy file folders. Select the pieces you want and mail the order blank to Servel, Inc., Evansville 20, Indiana.

Servel The GAS Refrigerator

# BOONE-CHILTON

(REG. TRADE-MARK)

## By-Product
## Retort—Water Gas

The Mechanically Cleaned Gas Coal sold under the trade-name Boone-Chilton is established as an outstanding value by operating results and coke quality, in practically all classes of carbonizing equipment. The coke produced is of strong structure, medium low in ash, with high fusing temperature—the characteristics which make it especially suitable for domestic use. As a Water Gas Generator Coal, Boone-Chilton has won a leading place in the industry.

## BOONE COUNTY COAL CORPORATION

**Sales Offices**

1528 Walnut St.
Philadelphia, 2

Book Building
Detroit, 26

VOLUME 167
Number 5

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# WE'RE ROLLING UP OUR SLEEVES...

## TO HELP YOU!

No need now to worry about the headaches of changing over to a new type of gas service... for today your change-over problem can be placed in the hands of a skilled engineering organization whose specialists are expert in every phase and detail of your conversion problem.

Now, one complete service, backed by years of practical experience in handling difficult change-over situations, can handle your entire change-over ...physical and sales potential surveys... engineering and construction changes... distribution and meter problems... appliance and equipment adjustments. Every detail of complete or partial conversion is carefully planned, supervised and executed by skilled personnel to insure satisfactory results... and customer acceptance.

This new change-over service gives valuable flexibility to utility companies who must supply today's growing demand for gas while preparing for tomorrow's needs.

Cost comparisons and operating experience show that placing the conversion problem in experienced hands can materially lower change-over costs through on-the-job economies learned from handling similar jobs... saving weeks of detailed planning right at the start... and protecting valuable customer relations.

Centralize responsibility in the hands of experts.

***If your company plans include surveys or conversions, write today for complete details.***

AGC

NOVEMBER
1947

AMERICAN
GAS JOURNAL

VOLUME 167
No. 5

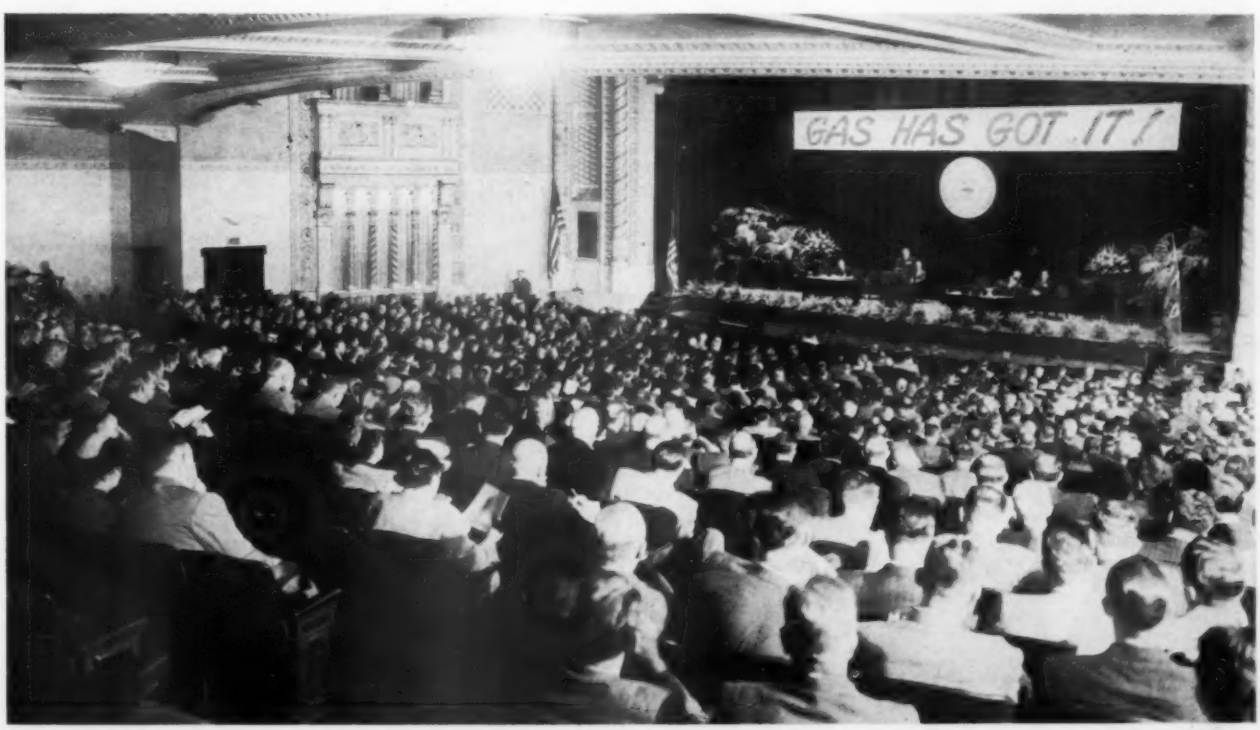
# Twenty-Ninth Annual Convention of the American Gas Association

APPROXIMATELY 4000 gas men attended the 29th Annual Convention of the American Gas Association, held in Cleveland, Ohio, Oct. 6, 7, 8. They came from every section of the United States and Canada.

General sessions meetings were held in the forenoon and section meetings were held in the afternoon of each day. All were well attended, indicating the intense interest of all in the discussions on the present problems of the industry.

The "Gas Has Got It" program, the greatest in A.G.A. history was prominently featured throughout the meeting.

Wednesday, October 8th was designated as Ralph W. Gallagher Day. Mr. Gallagher, whose leadership as Chairman of the Laboratories' Managing Committee, and whose generous contributions while President of the East Ohio Gas Company were largely responsible for the position these Laboratories occupy in the confidence of the industry and of the public, was thus formally recognized.



# General Sessions

Hudson W. Reed

Robert W. Hendee

Hugh H. Cuthrell

After being welcomed by the Mayor of Cleveland, Thomas A. Burke, the first general sessions meeting got under way. Mr. R. H. Hargrove, retiring president of A.G.A., delivered a spirited address, which will be found elsewhere in this issue of the *Journal*. He was followed by H. Carl Wolf, Managing Director of the Association, who reported the various activities of the Association. New officers for the ensuing year were elected. All general session meetings were held in the Music Hall, Auditorium.

The first paper at Tuesday's meeting was presented by Daniel J. Hennessy, President, Controllership Foundation Corp. He stated that a study recently released by the Con-

## Newly Elected Officers American Gas Association

*President*, Hudson W. Reed, President, The Philadelphia Gas Works Co., Philadelphia, Pa.

*First Vice-President*, Robert W. Hendee, President, Colorado Interstate Gas Co., Colorado Springs, Colo.

*Second Vice-President*, Hugh H. Cuthrell, Vice-President, The Brooklyn Union Gas Co., Brooklyn, N. Y.

*Treasurer*, Edward F. Barrett, President, Long Island Lighting Company, Mineola, N. Y.

### Directors—Two Year Terms

Walter C. Beckjord, President, The Cincinnati Gas & Electric Co., Cincinnati, Ohio.

Edward G. Boyer, Manager of the Gas Department, Philadelphia Electric Co., Philadelphia, Pa.

Henry R. Cook, Jr., Vice-President, Consolidated Gas, Electric Light & Power Co., Baltimore, Md.

Earl H. Eacker, Vice-President, Boston Consolidated Gas Co., Boston, Mass.

Joseph N. Greene, President, Alabama Gas Co., Birmingham, Ala.

D. A. Hulcy, President, Lone Star Gas Co., Dallas, Texas.

Frederick A. Lydecker, Vice-President, Public Service Electric & Gas Co., Newark, N. J.

James S. Moulton, Vice-President, & Executive Engineer, Pacific Gas & Electric Co., San Francisco, Calif.

Edward P. Noppel, General Consultant, Ebasco Services Inc., New York, N. Y.

John A. Robertshaw, President, Robertshaw Thermostat Co., Youngwood, Pa.

W. H. Rudolph, President, Savory Equipment, Inc., Newark, N. J.

Louis B. Schiesz, President, Indiana Gas & Water Co., Inc., Indianapolis, Ind.

Edward J. Tucker, Director and General Manager, Consumers Gas Co. of Toronto, Toronto, Canada.

Harry K. Wrench, President and General Manager, Minneapolis Gas Light Co., Minneapolis, Minn.

C. H. Zachry, President, Southern Union Gas Co., Dallas, Texas.

### Section Officers

*Accounting Section* — Chairman, John A. Williams, Niagara Hudson Power Corp., Syracuse, N. Y.; Vice-Chairman—Lester E. Reynolds, The Connecticut Light & Power Co., Hartford, Conn.

*Industrial and Commercial Gas Section*—Chairman, Leon Ourusoff, Washington Gas Light Co., Washington, D. C.; Vice-Chairman—Bernard T. Franck, Vice-Pres. Milwaukee Gas Light Co., Milwaukee, Wisc.

*Manufacturers Section* — Chairman, D. B. Stokes, Vice-Pres. United States Pipe & Foundry Co., Burlington, N. J.

*Residential Gas Section* — Chairman, Chester S. Stackpole, Consolidated Gas, Electric Light & Power Co. of Baltimore, Baltimore, Md.; Vice-Chairman — W. M. Jacobs, Southern Calif. Gas Co., Los Angeles, Calif.

*Technical Section*—Chairman, Arthur C. Cherry, Cincinnati Gas & Electric Co., Cincinnati, Ohio; Vice-Chairman—S. J. Modzikowski, The Peoples Gas Light & Coke Co., Chicago, Ill.

*Laboratories Managing Committee* — Chairman, Arthur F. Bridge, Vice-Pres. Southern Counties Gas Co., Los Angeles, Calif.; Vice-Chairman, Charles E. Bennett, Pres. The Manufacturers Light & Heat Co., Pittsburgh, Pa.

*Publicity and Advertising Committee* — Chairman, R. G. Barnett, Vice-Pres. Portland Gas & Coke Co., Portland, Oregon.

Edward F. Barrett
Treasurer A.G.A.

trollership Foundation, reveals that half the people in the United States do not trust financial statements made by business and that this skepticism is due largely to a lack of understanding of accounting methods. Quoting from the report, Mr. Hennessy continued:

"It is properly the responsibility of management to correct the public's wrong impression of the amount of profit made by business firms. Management, however, will be able to discharge this responsibility only if the accounting function provides the figures of profit made. Management, however, will be able to discharge this responsibility only if the accounting function provides the figures of business in terms and symbols so clear that they present a convincing picture of the operations and situations they represent."

Dorothy Ellen Jones, Superintendent of Home Economics, Cleveland public schools, outlined the active cooperation of the Home Service Department of the East Ohio Gas Co. in putting on demonstrations in the public schools, which brought excellent results.

Nelson Lee Smith, Chairman, Federal Power Commission outlined the procedure of the commission as it applied to the gas industry. He said that "the authority of Congress to regulate the natural-gas business is as sweeping as the concept of interstate commerce. It could extend, therefore, from the well-mouth, or even perhaps from the bottom of the well, to the consumer's burner tip. In conferring regulatory jurisdiction upon the Federal Power Commission, however, Congress clearly intended not to make the grant of authority co-extensive with its own basic powers. Particular emphasis was given to the intention that state regulatory authority was to remain unimpaired. By the terms of Section 1(b) of the Act, neither the production and gathering of natural gas nor its local distribution and the facilities used therefore, even though involving interstate commerce, were made subject to federal regulation.

"It must be assumed that federal regulation in this field is here to stay. But, if such regulation is to be truly in the public interest, it must be neither unduly partisan nor frozen into particular patterns; rather, it must be a just and realistic process, and therefore one which is sufficiently flexible to meet equitably the needs of constantly changing conditions. This is not something that comes about automatically. To have it so calls for the constructive thought and cooperative effort of all concerned."

## SECTION AND COMMITTEE CHAIRMEN 1947-48

ACCOUNTING

John A. Williams

INDUSTRIAL AND COMMERCIAL

Leon Ourusoff

MANUFACTURERS

D. B. Stokes

RESIDENTIAL GAS

C. S. Stackpole

TECHNICAL

Arthur C. Cherry

PUBLICITY AND ADVERTISING

R. G. Barnett

LABORATORIES MANAGING

Arthur F. Bridge

D. P. O'Keefe, retiring President of the Gas Appliance Manufacturers Association, discussed "The Responsibilities of Increased Production." He said that "the facilities which manufacturers utilize to produce gas appliances have been greatly ex-

panded since the war. In some phases of our manufacturing industry, the materials situation has been such that we could take advantage of these expanded facilities, and we have done so. For example, comparing the production of the first six months of 1947 with the first six months of our previous pre-war peak year in 1941, we find that the manufacturers of cast iron boilers have made and sold five times as many boilers as they sold in 1941. Similarly, the water heater manufacturers have been able to increase their production to two-and-one-half times that which they produced in 1941. Production of refrigerators is also up.

"While manufacturers of domestic gas ranges have increased their manufacturing facilities, they have been greatly handicapped by shortage of both hot and cold rolled sheet and strip steel. At no time since the war has the sheet steel problem been so critical. Everything we make is on practically a day-to-day basis, with no relief in sight."

He stated that the appliance manufacturers recognize the value of the promotional programs now going on and said:

"I feel that the national advertising program has taken the industry from a purely defensive position to an offensive one. Even with gas appliances, gas production and distribution equipment in short supply, we, as an industry, cannot afford to be placed in a defensive position by our competition.

"We don't consider the 'Gas Has Got It' a merchandise campaign, but, rather, an essential, educational and market conditioning campaign which will carry on into 1948. I want to emphasize the importance of the utilities providing sales-minded personnel (either home service girls or salesmen) to contact customers and to do a bang-up sales creation job which must be done in the field. We manufacturers do not believe that you can expect dealers to put enough salespeople into the field, ringing doorbells, to do the entire creative selling job which must be done until there is an ample supply of ranges to fill orders.

"With respect to trade shows, our manufacturers are questioning the value of: (1) repetitious shows; (2) shows notable for the absence of new developments; (3) shows overlapping other shows in coverage and attendance; (4) shows held in non-industrial areas; (5) shows held solely to stimulate income and attendance rather than progress. Our manufacturers feel that they should participate in certain national shows for their interest. They also feel that gas appliance exhibits in regional shows should be sponsored by the utility company, that is to say, they should purchase the space and erect the exhibit and participation in local and state shows should be left to dealers. * * *

"We manufacturers have been takink a great deal of interest in the rapid and rather spectacular development of the liquefied petroleum gas industry.

"Never in my time has there appeared such a strong ally, representing such a substantial section of the gas business. I do not believe that we can separate one section of the gas business from any other section. I believe, too, that we, in our industry, inherit the good or the bad will created beyond utility distribution systems by any L-P gas company.

"I also feel that your two senior departments in the A.G.A. can contribute greatly toward the orderly development of the liquefied petroleum gas business. To foster this development even more effectively, I should like very much to see the for mation of a third department in the A.G.A. It might be known as the Liquefied Petroleum Gas Department.

"A.G.A., with its three departments, would then represent a united industry with all of the advantages which that would represent, such as: Protecting the future growth of the operating companies; Combining the effectiveness of our advertising and sales promotion; and, making all expenditures on the part of your association, the operating utilities, the manufacturers, and the liquefied petroleum gas industry more effective."

H. Carl Wolf
Managing Director A.G.A.

The third session on Wednesday morning was opened by a paper presented by Frank H. Adams, President, Surface Combustion Co., Toledo, Ohio, and will be found in this issue of the *Journal*.

"Gas Has Got It" was the subject of a paper by John J. Quinn, Vice-President, Boston Consolidated Gas Co., and Chairman, National Advertising Committee, A.G.A.

Mr. Quinn said that "the 'Gas Has Got It' national program will be operated on three fronts. It consists broadly of A.G.A. National Advertising and Promotion Materials, "CP" Gas Range Manufacturers National and Regional Advertising and Promotion Materials; and local utility and dealer newspaper advertising promotion and direct selling effort.

"Approximately 60 per cent of the $4,000,000 total will be spent for newspaper advertising, Mr. Quinn declared, the major part of it by gas companies and the remainder by manufacturers and dealers. Local gas utilities have always favored newspaper advertising over any other single form of promotion. The campaign is of such a character that its full effectiveness cannot be achieved without localizing the national story in newspapers. We confidently expect a larger volume of such advertising than we have seen since 1941, when the American public purchased in that year 2,278,000 gas ranges.

"Results of a recent nationwide survey made by Elmo Roper Organization definitely indicated there were nine major points that a housewife wanted in a modern range. The forthcoming campaign will clearly inform the housewife that today's modern, automatic gas range has all of these nine points."

Ernest R. Acker, President, Central Hudson Gas & Electric Co., Poughkeepsie, N. Y., was one of the leaders in getting the Research Program of A.G.A. under way. It was started during his administration as President of the A.G.A., 1943-1944. His paper was on the subject of "Progressing Through Research and Promotion."

The American Gas Association will hold its thirtieth annual convention in Atlantic City, N. J., the week of October 4, 1948. The report of the Time and Place Committee under the chairmanship of Alfred Hirsh, St. Louis, Mo., recommending this selection, was ratified at the concluding general session.

# Technical Section

C. S. Goldsmith, Chairman, presided at the opening session on Oct. 6th and presented his report, reviewing the activities of the committee.

Col. Hudson W. Reed, newly elected President of the American Gas Association, and the President of the Philadelphia Gas Works Co. addressed the meeting, praised the work of the Technical Section and assured them of his support in their future activities.

The report of the Motor Vehicle Committee was presented by B. D. Connor, Boston Consolidated Gas Co., Boston, Mass., Chairman. This printed report includes several articles on the subject read at various meetings during the year, and copies can be secured by addressing the American Gas Association, New York.

The report on The Objectives of the Meter Engineer, was presented by H. J. Sterk, Peoples Gas Light and Coke Co., Chicago. The report states that:

"The objectives of the meter engineer can best be stated by answering the following questions.

1. Who is the Meter Engineer?
2. What is the scope of his responsibility?

The meter engineer can be anyone of the following, depending upon the size and functional set up of his company:

(a) The shop foreman
(b) The meter shop superintendent
(c) The superintendent of gas operations
(d) The engineer responsible for the overall engineering and operating phases of the meters and metering

The scope of his responsibility includes:

(1) The purchase of new meters
(2) The retirement of old meters
(3) The performance of meters in service
(4) The design and operation of the meter shop
(5) The method of installation of meters, either directly or indirectly
(6) Meter repair policy."

Then followed a discussion of the six points of the meter engineers' responsibility as they relate to his objectives. Copies of this report are available at association headquarters.

The report of the Distribution Committee, was presented by its Chairman, J. H. Collins, Sr., New Orleans Public Service, Inc. The report contains a fund of valuable information. It is in printed form and copies can be obtained at A.G.A. headquarters.

Handling and Storage of LP Products was the subject of a talk by A. B. Lauderbaugh, Chief Gas Engineer, Manufacturers Light & Heat Co., Pittsburgh, Pa.

Mr. Lauderbaugh discussed fire hazards and used slides to illustrate his points. He opposed the idea of underground tank farms, and suggested storage in rock salt cavities in the Appalachian area, up to 10 million gallons. He also discussed various methods of unloading tank cars and temperatures to reduce hazards.

On Tuesday, the Manufactured Gas Department and the Technical Section held a joint meeting, Chairman, Col. Hudson W. Reed.

Hugh H. Cuthreil, Vice-President, Brooklyn Union Gas Co., presented a paper on "What Natural Gas Can Do for the Manufactured Gas Industry." In view of the report that the Federal Power Commission has approved the application of a new

MANAGING COMMITTEE, TECHNICAL SECTION, AMERICAN GAS ASSOCIATION

L. to R. S. J. Modzikowski, Peoples Gas Light & Coke Co., Chicago, Ill., (Incoming Vice-Chairman Technical Section); A. C. Cherry, (Incoming Chairman, Technical Section) Cincinnati Gas & Electric Co., Cincinnati, Ohio; C. S. Goldsmith (Chairman, Technical Section) The Brooklyn Union Gas Co., Brooklyn, N. Y.; H. N. Mallon, Dresser Industries, Inc., Cleveland, Ohio; Thomas R. Weymouth, Consulting Engineer, New York.

pipe line company to bring natural gas to Philadelphia, New Jersey and the metropolitan district of New York, Mr. Cuthrell's paper is timely, and will be found elsewhere in this issue of the *Journal*.

The Gas Production Committee report was presented by S. Green, Chairman, Engineer of Manufacture, Brooklyn Union Gas Co., and the Steam Generation report as Applied to Carburetted Water Plants, was presented by A. D. Harrison, Brooklyn Union Gas Co. Both reports are available at association headquarters.

Four reports were presented at the last meeting of the section on Wednesday. They were:

**Motor Transportation in the Gas Industry,** Harry O. Mathews, Fleet Operations Manager, Standard Brands, Inc., Chicago, Ill.

**A Method of Testing the Adequacy of Gas Distribution Systems,** John J. Pugh, Assistant Engineer, Pacific Gas & Electric Co., San Francisco, Calif.

**Chemical Committee Report,** W. R. Fraser, Chairman, Experimental Engineer, Michigan Consolidated Gas Co., Detroit, Mich.

**The Economics of B.t.u. Storage,** Irving Resnick, Senior Process Engineer, Stacey - Dresser Engineering Co., Cleveland, Ohio.

Copies of all are available at Association headquarters.

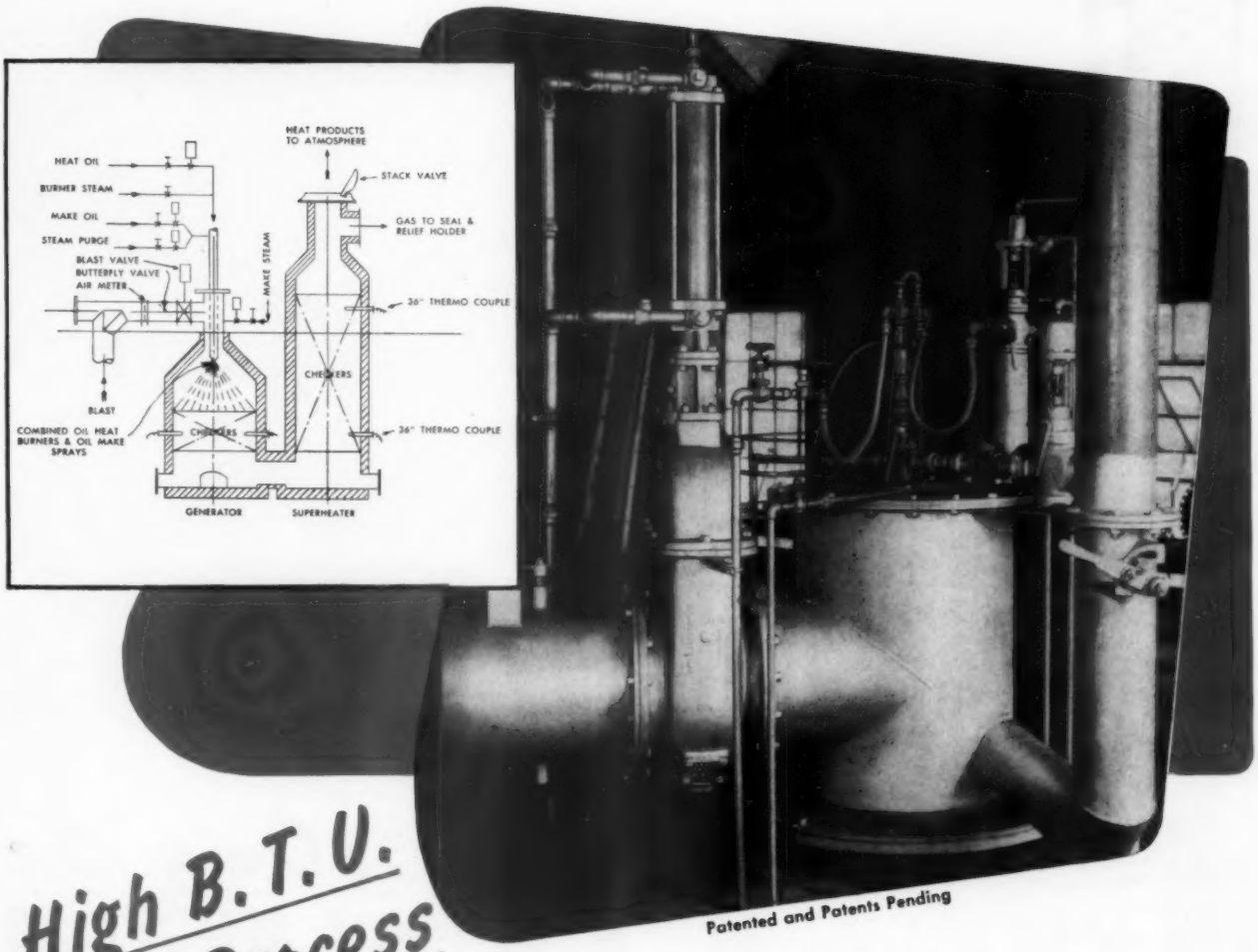

**CLEVELANDS**... TESTED AND PROVED BY MORE THAN 20 YEARS OF SERVICE TO THE GAS INDUSTRY... MEET EXACTLY ALL YOUR TRENCHING REQUIREMENTS FOR CITY... TOWN AND COUNTRY WORK

*Because*-

They have the characteristics needed for Dependable Daily Performance . . . Extreme Compactness, Mobility, Maneuverability, Speed, Power, and Stamina.

TRADE MARK

THE CLEVELAND TRENCHER CO.
20100 ST. CLAIR AVENUE
CLEVELAND 17, OHIO




# High B.T.U. Gas Process

Patented and Patents Pending

## Increases Plant and Distribution Capacity at Lowest Cost

The unit shown above produces oil gas within a range of B.t.u. from 900 to 1100 and specific gravities from the low .60's to .80's. These gases are highly interchangeable with natural gas for distribution purposes or to replace other types of manufactured gas.

A user in the New England Area recently made this statement about the High B.t.u. Gas Process: "There is no question but that the use of a high B.t.u. gas provides the lowest investment cost to increase both distribution and production capacity of any means now available to the industry." (Name on request.)

Following are some of the outstanding advantages of the High B.t.u. Gas Process:

- More thermal output per dollar of plant investment.
- Reduced manpower requirements for fuel handling, fire cleaning, ash handling, etc.
- Dependable 24-hour operation without shutdowns.
- "Fingertip" regulation of the quality of gas produced.
- Cleaner operation.

We shall be glad to send further information upon request.

**THE GAS MACHINERY Company**

*Manufactured Gas Plants and Special Equipment • Industrial Furnaces*

**16114 Waterloo Road • Cleveland 10, Ohio • KE 1130**

## *Look at these* NEW FEATURES

- Improved valve pocket design, making it easy to remove pocket for installation of new disc while regulator is in service.
- Improved adjusting screw which permits the adjustment of valve pocket to the correct distance from orifice face.
- Streamlined expansion chamber, giving greater capacity over all previous models, so that much greater capacity is reached with less pressure drop from "No Flow."
- New spring design will give performance equal to deadweight type adjustment.
- The new model is available in No seal, Mercury seal, and Integral Diaphragm Relief valve type in top, or separate mechanical seal, deadweight or spring type attached.
- Available connection in ¾" x ¾", ¾" x 1", ¾" x 1¼", 1" x 1", and 1" x 1¼", 1¼" x 1¼".
- Range of orifice sizes from 3/16" to 3/8".

**The new Mercury Double Cup Seal is especially designed for all No. 1 High Pressure Service Regulators of new design by Reynolds.**

# .....*Only the* NEW No. 1 MODEL 10 *has all these advantages...* PLUS

**The new Improved Valve Pocket Assembly and adjusting screw as used in this model can be used in all former Model 10 No. 1 type regulators.**

**The new No. 1 Model 10 type Regulator uses the same diaphragm as the former No. 1 Model 10 type Regulator.**

**This Regulator can be installed without any pipe changes where any former No. 1 Model 10 Regulator has been in service.**

*RECOGNIZED GAS CONTROL SINCE 1890...*

**Reynolds GAS REGULATOR CO.**
ANDERSON, INDIANA

# Industrial and Commercial

THE MEETING opened with a luncheon at the Hollenden Hotel, October 7th, with Karl Emmerling, chairman of the section, presiding. The speaker was Louis Ruthenburg, President, Servel, Inc., and his subject was "Where Do We Go From Here?" He said in part:

"Mixedupness," to quote John Gunther, "is very evident in our country's present economic condition. Pre-war measuring sticks fail to give us convincing answers. Post-war economic patterns are strangely unlike the patterns we knew before the war. Prophecies vary from forecasts of long-continued, high level business, employment and profits to dire predictions of early economic collapse.

"There are all sorts of crazy price distortions," he declared. "Costs of farm products and construction have advanced fantastically. Prices of manufactured goods are less inflated than they were after World War I.

"Of course there must be readjustments. In all likelihood costs and prices eventually will be stabilized at levels substantially above pre-war prices and costs," Mr. Ruthenburg predicted. "We cannot have 1941 prices with 1947 dollars. We cannot have cheap money and cheap goods at the same time.

"Many economic trends which we had come to regard as normal were interrupted by the depression which began in 1929 and by World War II. Vast political, social, economic, scientific and technological changes have taken place during the confused years that followed 1929. Complex interrelationships among these forces must be taken into account, and haphazard political policies have raised new obstacles—obstacles which seem likely to prevent consistently improved productivity in the future.

"Increased productivity results from cooperative action of innovators, investors, technicians, consumers, workers and management. Each responds to certain incentives. Each fails to cooperate in the absence of such incentives. In this republic each has the right and power to promote or obstruct the processes through which improved productivity may be attained.

"Modern business management is a trusteeship. It holds in trust the interests of three principal groups—consumers, employees and investors.

"Failure to serve the interests of any one of these groups will result finally in injury to the others.

"A very delicate balance is involved among these interests. Disturbance of that balance may endanger the entire economic structure. As Dr. Leo Wolman has said, 'In this country we operate on an economic system that is a complex, sensitive and subtle system. It isn't easy to destroy, luckily, but it's easy to throw it out of gear. It's easy to impair its operations by a variety of means.'

"Each of the three groups—consumers, employees and investors — has the power to disturb the balance and to injure itself and its associated groups.

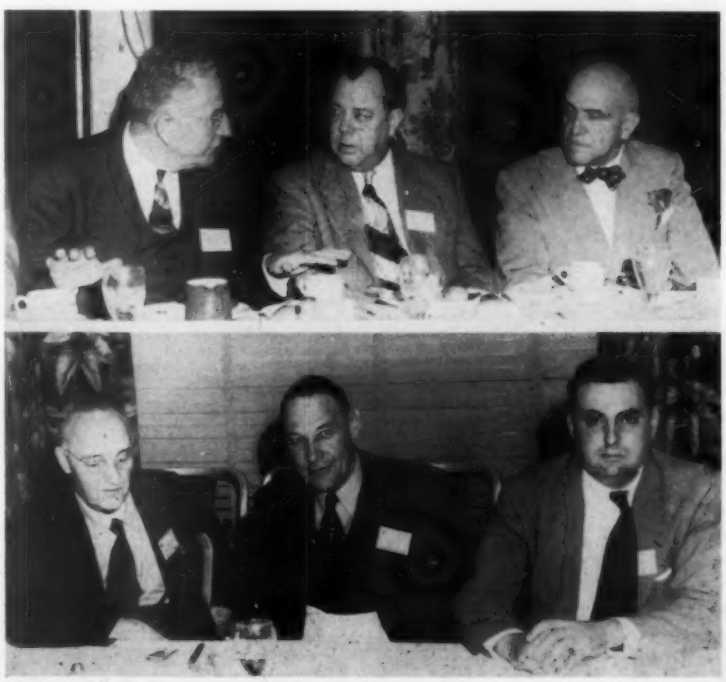
"It seems to be incumbent upon businessmen not only to understand the viewpoints of workers, consumers and investors but to bring these groups to understand the mutuality of their interests, their great common stake in preserving individual freedom, opportunity and incentives, as well as the true functions of business management in serving their interests. Our economic structure cannot be preserved without the cooperation of these groups, and only mutual understanding can insure cooperation."

Karl Emmerling, chairman of the section, and General Sales Manager, The East Ohio Gas Co., Cleveland, presented a report outlining the activities of the committee.

Paul P. Logan, Director of Food Research, National Restaurant Association, Chicago, presented a paper on the subject "America Eats Out." He said that the public feeding industry ranks second to none other in contributing to the health and welfare of our citizens. More than a quarter of all the food consumed by Americans is served at public feeding establishments. Its dollar volume of twelve billions per year places it third in our retail industries. Its five hundred thousand establishments are distinctly free enterprises and almost entirely independent in management and capitalization. One peculiarity of this industry is that less than a quarter of the operators do more than three quarters of the total business. This segment can be properly classified as "big business." Its man-

Upper:—Head table guests at the Section luncheon included Col. Logan, (left), D. A. Hulcy, President, Lone Star Gas Co., Dallas, Texas, (center), and Louis Ruthenburg, President, Servel, Inc., who was the luncheon speaker.

Lower:—Three gentlemen from Canada attended the Section's Managing Committee meeting. They are, left to right: H. E. G. Watson, Consumers Gas Co. of Toronto; R. L. French, Union Gas Co. of Canada, Ltd.; and R. M. Perkins, Union Gas Co. of Canada, Ltd. The latter two represent the company that will act as host for the Section Sales Conference in Windsor, Ontario next April.



agement is progressive and highly proficient. It is constantly in study of public relations, of the labor situation and of progress in the development of foodstuffs, food processes and equipment. It is prompt to adopt means and conditions which will increase its operating efficiency and improve its competitive position. It is seldom misled by crack-pot ideas or phony products.

He referred to a survey made by the Association covering the requirements for cooking and refrigeration. An abstract of this report was printed in the September, 1947 issue of the *Journal*.

Ralph A. Sherman, Asst. Director Battelle Memorial Institute, Columbus, O. discussed the subject of "Fuels Supply" as affecting the gas industry, including fuel reserves, the significance of production of synthetic gasoline from natural gas, production of gas of high calorific value from coal and atomic energy. In conclusion, he said the answers to the problems that have been discussed may be briefly summarized as follows:

1. The prospects for continuation of the demand for gas for residential heating will depend on the sustained level of income of the people and the price of gas relative to other fuels.

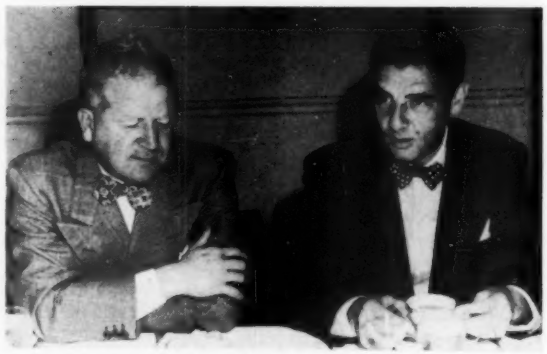
2. The efforts to balance the winter peaks of residential heating by compensating summer and year-round industrial loads appear to be in good hands in the promotional and research efforts of the industry.

3. The state of our reserves of petroleum and natural gas cannot be given with certainty, but they appear low enough to cause real concern and require efforts to meet the crisis when it comes.

4. The production of synthetic gasoline from natural gas at the well is likely to have no major effect on the price of gas to the consumer, but it will hasten the depletion of the reserves.

5. The successful production of gas of high calorific value from coal is of great importance to the entire gas industry. Although there is not complete agreement at this time as to the economic feasibility of present proposed processes, research by all interested parties is well justified. As a definitely interested party, the gas industry could well increase to a major extent its support of research on methods of gas production.

6. The successful development of methods for the production of electric energy by atomic fission should have little effect on the demands for gas.



New officers of the Industrial and Commercial Gas Section. Vice Chairman, Bernard T. Franck, Milwaukee Gas Light Co., (left) and Chairman, Leon Ourusoff, Washington Gas Light Co.

"Maintaining Good Relations During Critical Times," was the subject of a paper presented by Ralph S. Wenner, Industrial Sales Manager, Ohio Fuel Gas Co., Toledo, O. He stated that "customer relations is always an important and timely subject, and to the Industrial Engineer it is particularly so at this time. For years his activities were pointed toward selling a greater appreciation of gas for the purpose of stimulating demand, building load and increasing revenues. Now, almost overnight, the ultimate in his hopes has been accomplished and the demand for gas fuel exceeds any reasonable expectation of being satisfied for years to come. Not only is it no longer necessary that the Industrial Engineer devote time to selling his product, but it is not expedient that he do so. His function becomes not so much that of selling gas, or the means of accomplishing this, as of tactfully regulating the demands to be made upon us. Of course, that is still a selling job and, if anything, a more difficult one than ever before since it is more than ever concerned with intangibles. But it is a different type of selling job than that to which we had been accustomed and since it may reasonably be presumed that it is the type of selling with which we will be concerned for some time to come, it is only fitting that we give some serious thought to its analyzation.

"What is it that needs to be told? Obviously we must give the answers to the questions foremost in the customer's mind. Here, at least, are the more important of such questions, and to the extent that they can be satisfactorily answered a continuance of good customer relations is assured.

"How long will this shortage last? Is it to be a permanent condition or is it only temporary? This, I think, is the question uppermost in their minds.

"Here we have the opportunity to show that it is not a gas shortage but in every sense a material shortage and the same material shortage which has restricted every industry since V-J Day in varying degrees and at different times.

"Reserves have never been as great as they are today but these reserves for the most part are in the Southwest, removed from many markets and available to these markets only after more transportation facilities are built. It is not a permanent condition but will last only so long as material shortages exist.

"They want to know just what we have been doing and are doing to correct these conditions. To what extent could the situation have been foreseen and was there negligence in preparing for it?"

Mr. Wenner gave details of the activities of his company to increase gas supplies for high peak loads. In conclusion he said: "Our customers are quite sensitive, and understandingly so, about advertising devoted to promoting new load. They can be made to understand that promoting the sale of new ranges, refrigerators, water heaters and the like, add nothing, in an appreciable way, to peak demands and in most cases act to lower consumptions. They will understand, also, that up-grading of existing heating equipment or equipment in their own plants likewise serves such purpose. But advertising that is aimed at promoting new loads is objectionable. Our advertising—at least on the local level—should, therefore, in the interest of better relations, omit all such objectionable copy. Rather we should use as much of it as possible in telling and retelling our story. Currently we have been using, and we think quite effectively, a story in connection with our propane plants; stressing the fact that we, too, are installing stand-by equipment. What promotional advertising is done during these times should be limited to the national level and even here some space should be devoted to telling that part of the story which is common to the industry."

# Residential Gas

THE Residential Gas Section held but one meeting—Oct. 6th. W. M. Chamberlain, chairman, presided.

The first paper was "What About Gas All-Year Air Conditioning", and was presented by Frank C. Smith, President, Houston Natural Gas Corp., Houston, Texas. He said in part;—

"Gas all-year equipment has provided a new concept of air-conditioning service—it is unique in its field. It offers unlimited heating capacity as well as adequate cooling, with the quiet operation and long-life expectancy of that other superb appliance, the gas refrigerator. Its load factor is ideal, and it gives a new experience in air conditioning quality—temperature and humidity control, both built in. Its operating cost is attractive; with the Servel unit, 50c per M. C. F. of 1,000 B. T. U. gas is equivalent to 1c per kilowatt-hour of electricity.

"With aggressive promotion and sales effort, properly organized, the residential and commercial market, as well as the big industrial market, can be entered with success. Local advertising as well as national will bring desirable prospects and sow seeds in fertile ground. Every homeowner and home-builder would like to have all-year air-conditioning, and he can be sold on gas equipment if your people are 'on the beam'.

"To all gas men, especially those whose activity toward new and more gas load is unrestricted by gas supply —whose only limits are their own energies—I commend year-round air-conditioning as one of the best load builders ever developed for us. Highly adequate and satisfactory equipment is now available, and more and other will be ready in quantity before too long. We have before us, as always, the choice between contentment with ourselves and our present business on the one hand, and, on the other, the acquisition of this ideal additional business which is good for us and good for our customers, too. Opportunity is knocking now! The 5th big job is asking to be done."

Mildred Clark, Home Service Director, Oklahoma Natural Gas Co. Tulsa, Okla., presented a very interesting talk entitled "Doing What Comes Naturally," and was followed by C. S. Stackpole, Merchandise Manager, Cons. Gas Electric Light & Power Co, Baltimore who pointed the way to "Cashing in on the New Freedom Gas Kitchen Program."

Harry Boyd Brown, President, Good House Stores, Inc., Phila., Pa., had prepared for presentation a paper on retail advertising and selling. Illness prevented his attendance, but we quote from it in part:—

"One of the most essential things in all business, and certainly in retail promotion, is advertising. When I talk about advertising, I am talking about the kind, whether it is direct mail, radio or newspaper, that when it is run on Monday, truly sells merchandise on Tuesday, with prestige, publicity, cumulative effect as by-products. If the publicity and prestige are there in addition to actual sales, that is fine, and it is bound to be there if you sell the goods.

"I'm talking about the kind of advertising that doesn't consist of fancy artwork, and epigrams, and snappy phrases and poetry, but has instead plenty of persuasive selling in it, a lot of punch, and human interest, a heart to heart style of copy that gets the business.

"High pressure seems to be the order of the day, and we had better not omit it in selling when this buyer's market arrives. And by high pressure selling, I do not mean false claims, misrepresentation by tricky wording. I do not mean selling people things they should not have and cannot pay for.

"By high pressure selling, I mean salesmen knowing the merchandise or service they have to sell, knowing it thoroughly and being enthusiastic about it. I mean the salesmen who drive hard and intelligently every minute to sell their product because

Upper, L. to R. Frank H. Adams, Surface Combustion Corp., Toledo, Ohio; Ralph W. Gallagher and F. H. Lerch, Jr., Consolidated Natural Gas Co., New York, N. Y.

Lower, L. to R. Frank C. Smith, Houston Natural Gas Corp., Houston, Texas, Elizabeth J. Lynahan, (Incoming Chairman, Home Service Committee) Peoples Gas Light & Coke Co., Chicago, Ill.; F. X. Mettenet, The Peoples Gas Light & Coke Co., Chicago, Ill.

they know that it is what the consumer needs and they can prove it.

"High pressure advertising and selling has done more than anything else to increase employment, and buying power, and to make the American standard of living the highest in the world.

"The world's greatest salesman is not a topflight executive, he is not a world-famous manufacturer, nor a manufacturer's salesman, nor the moving spirit behind a huge jobbing house. He is not the wholesaler's salesman—nor even the proprietor of a retail store.

"He is a *retail salesman* who really knows his stuff, who is really interested in the product he is selling, and who really understands consumer psychology.

"I maintain that a good retail salesman is the greatest salesman in the world because he is the salesman who really makes the sale. No merchandise can be considered sold until it is in the hands of the buying public."

# Natural Gas Department

Robert W. Hendee, Chairman, Natural Gas Department, A.G.A., presided at the one meeting held by the department.

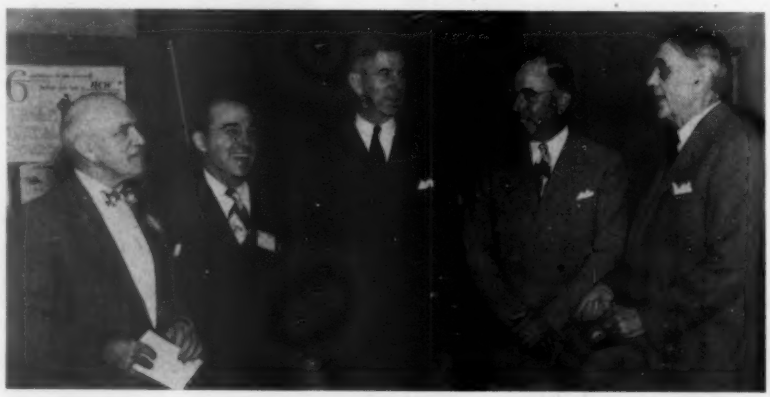
"Development of Standards for Testing Gaseous Fuels" was the subject of a report presented by A. W. Gauger, Director, Mineral Industries Experiment Station, Pennsylvania State College. Mr. Gauger is also Chairman, A.S.T.M. Committee D-3 on gaseous fuels. His report referred to the activities of subcommittee D-3-I on collection of gaseous fuel samples; D-3-II on measurement of gaseous fuel samples; D-3-III on determination of calorific value of gaseous fuels and D-3-IV on determination of specific gravity and density of gaseous fuels.

W. F. McConnor, Vice-President in Charge of Sales, National Tube Co. discussed the demand for steel tubular goods. He stated that early this year his company conducted a spot survey among some of the large oil and gas companies covering 20" and larger pipelines they had on order or desired to install within the next 5 years. The aggregate of this tonnage averaged about 1,200,000 tons per year. "There is," he said, "no doubt, some duplication of tonnage where competing companies desire to lay lines serving the same locality, and probably some of the projects are still in the preliminary stages. However, it is evident that even allowing for some reduction to establish a firm demand figure, this tonnage is beyond the ability of the steel industry to produce in this period. It must, of course, be recognized there is considerable additional trunk line tonnage in sizes smaller than 20", as well as a substantial amount of distribution and gathering line tonnage. The total trunk line tonnage in all sizes has been estimated by various people in the industry to represent a demand as high as 1,500,000 tons per year over the 5-year period. The total trunk line tonnage for all sizes of pipe in the prewar, 1936-1940 period has been estimated at 260,000 tons per year, and while the steel industry has produced and is producing substantially more trunk line tonnage than in the prewar period, it cannot be expected to satisfy the unusual demand in the immediate future. Another important factor in analyzing the demand is the complete change in the nature of the requirements. In the 1936-1940 era, trunk line pipe 20" and larger represented only about 17% of the total demand, while today it has been estimated to be as high as 72% of the total trunk line tonnage."

"Fuels for Today and Tomorrow" was the subject discussed by Max W. Ball, Director, Oil and Gas Division, U. S. Department of the Interior. With regard to the outlook for gas for the coming winter, he said:

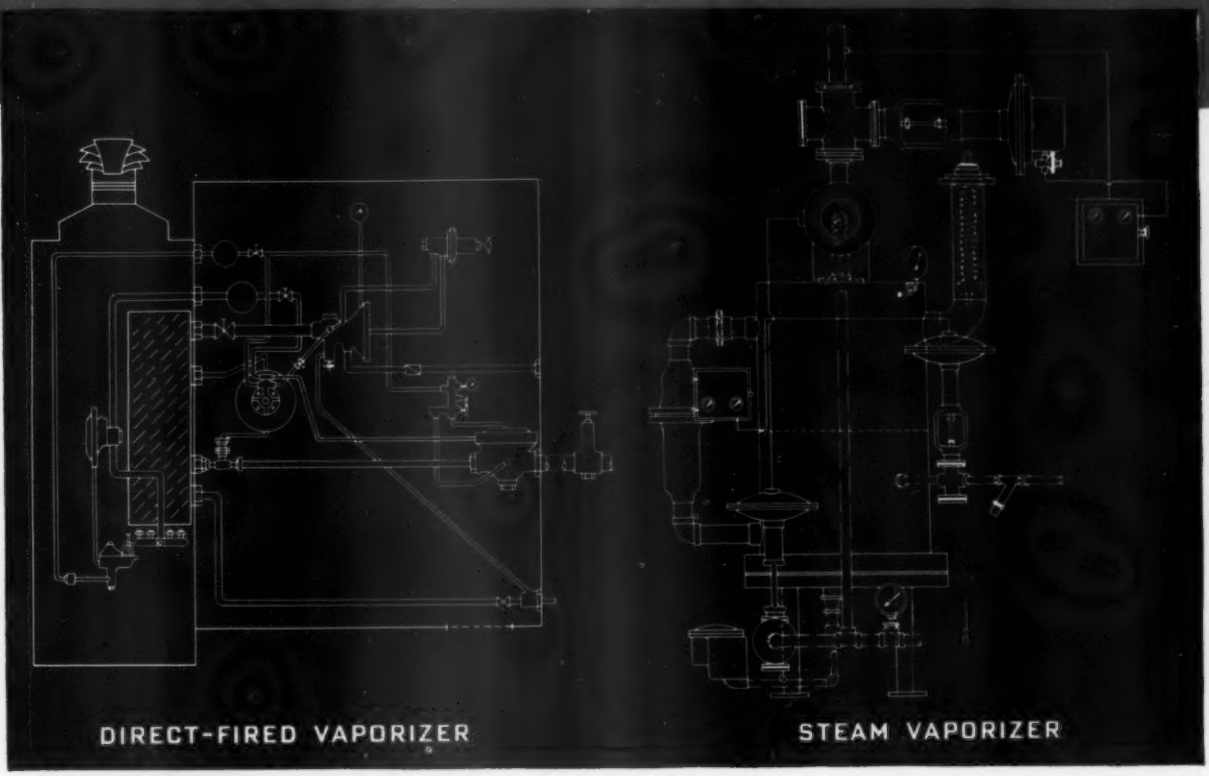
"I shall waste no time trying to tell an audience of gas men about the natural gas outlook for this winter. Some of you, by foresight, by resourcefulness, or by fortunate situation, have been able to provide adequately for your markets and can look forward to winter with nothing but normal operating worries. More of you, those of you especially who operate between the Appalachians and the Rockies, face a winter of concern—concern over spreading inadequate supplies to do the greatest good, curtailing where curtailment will do the least harm, manufacturing as much gas as possible to meet your peaks and selling it at less than the cost of manufacture, and praying that the winter will be mild, so that the people in your care will not suffer too much hardship.

"When we get through this winter, where will we be? What are the prospects for the next winter and the next and the winter after that? As for gas, some pipe will be available and some pipe lines or major loops will doubtless be built next year. In 1949 more pipe should be available and more lines should be completed. By 1950 the gas situation should have eased materially in many localities that will be short of gas this winter and next."



L. to R. Louis Ruthenburg, Servel, Inc., Evansville, Ind.; H. Carl Wolf, A.G.A. New York, N. Y.; C. M. White, Republic Steel Corp., Cleveland, Ohio; J. French Robinson, The East Ohio Gas Co., Cleveland, Ohio; J. A. Brown, The Commonwealth & Southern Corp., New York, N. Y.

# IF YOUR PROBLEM INVOLVES LP-G YOUR BEST CHOICE IS *PGC*



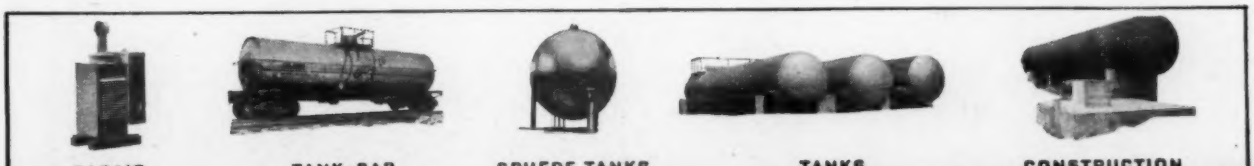

• Because Pacific Gas Corporation engineering and construction experience covers *every* phase of LP-Gas utilization . . .

• Because PGC engineers and installs every kind of LP-G plant for peak-shaving, augmentation, enriching or reforming . . .

• Because PGC's *complete* service includes designing and engineering the installation . . . provides storage tanks, vaporizers, mixers and other equipment . . . constructs the job . . . and also furnishes PACIFIC propane. PGC will do all or any part of the job. . .

• And because a PGC engineer is in your locality and will gladly discuss your problems, giving you the benefit of PGC experience without cost or obligation on your part. . .

• Make PGC *your* first choice. Call or wire your nearest PGC office today!




**Pacific Gas Corporation**

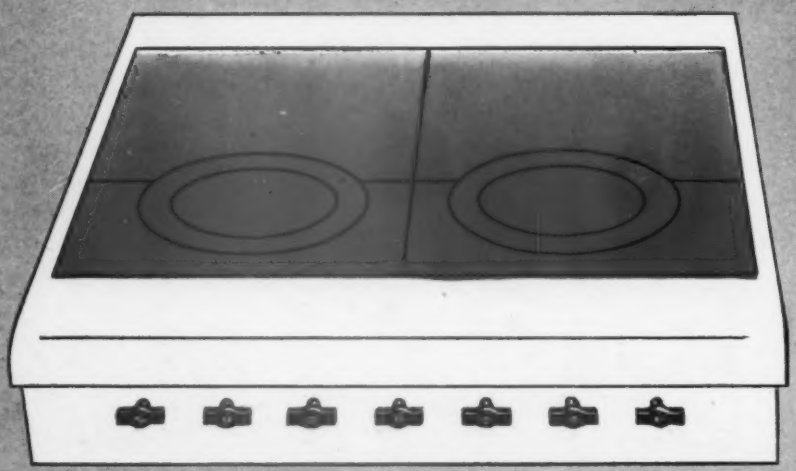
SPECIALISTS IN LIQUEFIED PETROLEUM GAS · MARKETING · ENGINEERING · UTILIZATION

Rockefeller Center • 630 Fifth Avenue • New York 20, N. Y.

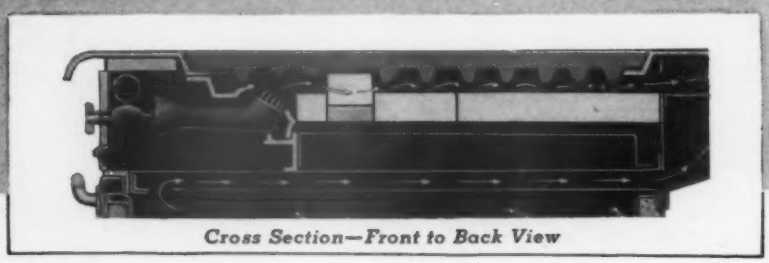
Denver • Los Angeles • San Francisco • Chicago • Houston • Kansas City

# UNMATCHED

## *Flexibility of Control on the Hot Top is Yours—*



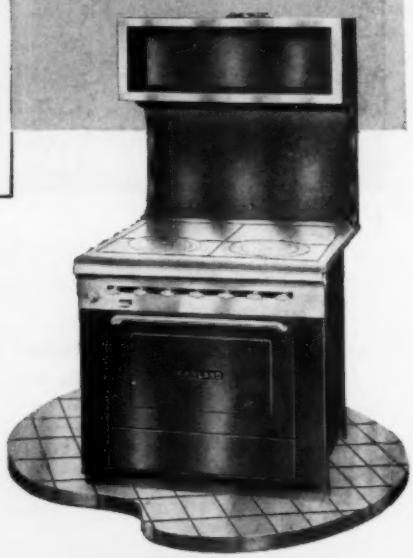
**when You Choose the LEADER**



*Cross Section—Front to Back View*

The Garland All Hot Top Range has the features to deliver *any* heat the chef wants—*where* he wants it—*when* he wants it. Each of the seven burners which heat the Hot Top are individually controlled. By adjustment, the chef can vary the heat on different sections of the Hot Top to exactly suit his needs.

But this is only one way Garland makes it easier to cook more food, *better!* Everywhere throughout the range, there are features, engineered by men who know volume cooking requirements; important refinements which always identify the *leader!* For greatest value, *choose the leader!* See your Garland dealer—or write us for information on any type of equipment you may need.



*GARLAND*
*All Hot Top Range No. 45-28 CX*

# GARLAND

*THE TREND IS TO GAS*

FOR ALL COMMERCIAL COOKING

HEAVY DUTY RANGES • RESTAURANT RANGES • BROILERS • DEEP FAT FRYERS • TOASTERS
ROASTING OVENS • GRIDDLES • ALL TYPES OF COMMERCIAL COOKING EQUIPMENT

**Products of Detroit-Michigan Stove Co., Detroit 31, Michigan**

# Home Service

Three hundred seventy - five early risers met at the Home Service Breakfast at the Hollenden Hotel on Tuesday morning, October 7th.

Due to the shortened Convention this year, and the need to open General Sessions at 9:30, the Home Service Breakfast too was shortened with the entire occasion timed and operated with the usual Home Service dispatch. The theme was that of the part Home Service will play in the gas industry campaign "Gas Has Got It"—and gift wrapped packages on each table presented first copies of the new booklet, "Home Service Spotlights the Automatic Gas Range." The many and varied opportunities open to gas company home service departments to tell women the superiority features of automatic gas cookery are included in this new booklet and the Association Officers present at the Breakfast commended the work of Home Service Committee Members in making it available to the industry for use in the big campaign. Expressing themselves in this way were President R. H. Hargrove; Managing Director Carl H. Wolf and W. M. Chamberlain, Chairman of the Residential Gas Section.

Mrs. Mary Belle Burnett, Home Service Director of the Cincinnati Gas and Electric Company presided in her capacity as Chairman of the Home Service Committee. Eighteen Home Service Directors assisted as Breakfast Hostesses.

Appreciation was extended by the Chairman to the Manufacturers of the "CP" gas ranges for the red "buttonhole" roses found at each place at the Breakfast.

Specialized activities current in Home Service operation today were described in the six-part program on Tuesday afternoon in the Ballroom at the Hotel Statler.

"Home Service in Dealer Cooperation" was presented in two parts. J. E. Humphreys, Business Promotion Manager of The Ohio Fuel Gas Co., Columbus, Ohio, enumerated the many ways in which Home Service plays an effective part in the successful dealer program. The service of the Home Call—the training of dealer salesmen in customer attitudes—the store demonstration were indicated. As proof, Mary Huck, Field Supervisor in the Home Service Department, gave a dealer demonstration, pointing up the different ways in which range fixtures can be made clear to women visitors. She showed a "Dealer Kit" in which all of 84 pieces of equipment, including a pressure cooker, used in the demonstration, were packed into a carrying case resembling a suitcase.

NATION'S FIRST CERTIFIED NEW FREEDOM GAS KITCHEN

This kitchen recently installed in Detroit by Michigan Consolidated Gas Company has a complete complement of the most modern gas equipment available. Units were described in the September issue of the Journal, page 45. Contacts with architects and builders help in sales promotion of this superior type of installation.

Home Service Girls of The East Ohio Gas Co., illustrating the 9 points of the "Gas Has Got It" campaign in conjunction with J. J. Quinn's presentation of his address.

Work with young people is an important part of the activities of the Home Service Department of the Michigan Consolidated Gas Co. at Grand Rapids. Eleanor Morrison, as Home Service Director and formerly City Supervisor of Home Economics in Grand Rapids, stated that such programs for high-school girls needed to be geared to their particular interests and organizations. Special distributive material such as one booklet "Date Tricks in the Kitchen," play up foods most enjoyed by "Teen-Agers" and menus fit into their social activities and the language used is adapted to their own terminology.

Arnold G. Bur, Sales Manager of the Wisconsin Public Service Corporation at Green Bay, described the "School Kitchen Replacement Plan" used in the territory served by this company.

A special printed booklet in "Questions & Answers" explains the plan and includes, too, the contract under which new equipment for school laboratories can be made available for use in food classes.

A well-known Cleveland Home Economist presented a thought-provoking address on the subject "Women Have Ideas." Miss Helen Robertson, Home Economics Editor of the Cleveland Plain Dealer, brought out the similar opportunity and obligation of the printed page and the home service demonstration to keep American women informed on newsworthy happenings in modern living.

What women want to read or what they want to listen to should be carefully studied and presented, said Miss Robertson, if the best possible use is made of the homemakers' time and attention.

To answer one side of the question—are large or small audiences in home service the most profitable?—the publicity value of large theatre cooking schools was emphasized by Ardis Hubbs of the Minneapolis Gas Light Company. She told of the good relations value between the gas company, the contributing sponsors and the neighborhood people in attendance.

In Minneapolis the neighborhood theatre cooking school has become an annual event to which women look forward each year.

The Home Service Round Table Chairman, Mrs. Mary Belle Burnett of The Cincinnati Gas & Electric, also introduced to the afternoon attendance, Miss Ina Lindman, Home Economics Director of the United Fruit Company in New York, who explained briefly the theatre "shorts" soon to be available in theatres around the country on the cooking of bananas.

In setting up facilities for the food pictures, Miss Lindman has received the cooperation of several home service departments in the American Gas Association and she stated that recipe folders on banana cookery would soon be available for distribution by gas companies in the cities where the "shorts" were to be shown in local theatres.

### Gas Operations in Australia

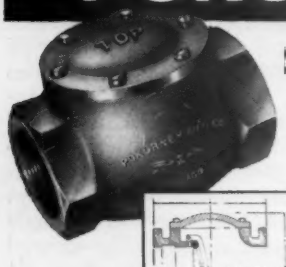
The twenty-first annual report of The Gas Supply Company, Ltd., of Melbourne, operating 10 plants in Queensland, New South Wales and Victoria, gives a summary of operating conditions.

The basic wage from 1932 to June 1937 has increased 70% while the average price of gas for the 5 Victorian plants is now 12½% lower than in 1932.

Gas appliances are in short supply, but residential, commercial and industrial customers have all steadily increased during the last decade.

There have been considerable extensions of mains and plant additions. No strikes have occurred at any of the plants during 21 years of the Company's existence.

POKORNEY



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Specify Pokorney check valves for more efficient service on manufactured, natural or liquefied petroleum gas lines. Series 3000 valves are fitted with a synthetic rubber seat permanently molded to aluminum check disc. Provides a perfect seal against back flow... unaffected by liquefied petroleum gases or condensate. Special seat design and precision machining prevent sticking. Free action disc opens fully providing full flow thru valve with minimum resistance and negligible pressure drop. Size ⅛" to 6" available for immediate shipment from stock in bronze, aluminum and grey iron. Larger sizes on special order. Write for prices and bulletin today.

Pokorney valves are machined to strict tolerances. Every valve individually tested. Fully guaranteed.

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- ☐ Full flow, low maintenance, long service.

SERVING THE GAS INDUSTRY FOR OVER 40 YEARS
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COLUMBIA CONVERSION GAS BURNERS

More Popular Than Ever
With Home Owners and Dealers

DEALERS SAY—Columbia Nutipe Burner has a common sense design. Closely duplicates operation of appliance when solid fuel was used. Easy to install. Seldom requires service.

HOME OWNERS SAY—Gives quick heat transfer and earlier delivery of heat to rooms. Has tamper-proof controls and quiet operation.

MODEL P-ZE shown here is designed for use in warm air furnaces or round type boiler where grates are removed.

Send for free folder giving complete instructions for installing

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# HUMPHREY GAS UNIT HEATERS

*Check these features....*

**1. Proved Dependability** **3. Economical Operation**

**2. Advanced Styling** **4. Rugged Construction**

More and more users every year testify to the economy, convenience, durability and complete heating satisfaction obtained from Humphrey Gas Unit Heaters. Stylish, self-contained and easily installed, these heaters are ideal for the heating of large or small areas. Stores, shops, factories, warehouses, service stations — these are but a few of the countless places where Humphrey Unit Heaters will be found delivering clean, circulated gas heat.

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## GENERAL GAS LIGHT COMPANY

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# AWARDS

## Distinguished Service

Highest honor within the gift of the American Gas Association was conferred on Harry D. Hancock, president of Gas Advisers, Inc., New York, N. Y. Mr. Hancock received the A.G.A. Distinguished Service Award for having made the most outstanding recent contribution of an individual toward the advancement of the gas industry, and for his able and energetic leadership "from which the natural gas industry in particular has benefited beyond measure from added engineering knowledge, improved technique and standards in connection with natural gas production, transmission and measurement problems."

Harry David Hancock

Specifically Mr. Hancock was honored for his strong advocacy of thin wall high tensile strength pipe for long distance natural gas transmission at high pressures. Largely through his efforts, installation of such pipe is now common practice, resulting in immense savings to the public and the natural gas industry. He was further commended for his long continued and successful efforts in the design and specifications for compressor station piping in conjunction with natural gas transmission which has resulted in a record of safe and economical operation of such stations.

The Distinguished Service Award consists of a substantial financial acknowledgment and engrossed certificate.

The late A. R. Thomas, formerly senior research engineer, Servel, Inc., Evansville, Indiana, received Honorable Mention for his many contributions to the development of gas-operated domestic refrigeration and the all-year gas air conditioner.

## Meritorious Service

Heroic action by James Walter Williams, a meterman of Houston Pipe Line Company, Texas City, Texas, at the time of the Texas City disaster, was awarded the American Gas Association Meritorious Service Medal for having performed the most outstanding meritorious life-saving act in the gas industry during the past year.

The award, which consists of a gold medal, button and certificate, was made possible by the generosity of the late Walter R. Addicks, senior vice-president of the Consolidated Gas Company of New York (now Consolidated Edison Company of New York, Inc.)

Mr. Williams received this high national honor in recognition of the "cool courage, intelligence, quick decision and the risking of his own life during the disaster which befell Texas City in the chemical plant explosions beginning on April 16, 1947." His devotion to duty in closing off the natural gas supply was instrumental in alleviating suffering and preventing untold loss of life and property.

J. Walter Williams

Amidst the havoc and chaotic conditions resulting from the series of explosions, Mr. Williams on his own initiative not only closed off the main block valve controlling all gas entering the stricken area but rendered conspicuously effective service in his capacity as fire marshal. With 57 of the 65 men in Texas City's two fire companies dead from the original explosion, Mr. Williams, who was thoroughly familiar with fire plug locations and other local conditions, directed firemen brought in from all over South Texas to combat the flames. It took three days and nights of ceaseless work before the dangers from further explosions and spread of fire were past.

Mr. Williams served as a Sergeant in the United States Marine Corps in World War II and has been active in civic affairs of the Texas City community.

## Beal Medal

Edward G. Boyer, manager of the gas department of the Philadelphia Electric Company, Philadelphia, Pa., was honored for contributing the best paper to Technical Section meetings of the Association throughout the year. Mr. Boyer received the Beal Medal for his paper entitled "Economic Production for Gas Loads Ahead."

Edward G. Boyer

The award was presented at the second general session, on behalf of the donor, Ernest R. Acker, president, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y., representing the family of the late W. R. Beal who established the award in 1897. It consists of a bronze medal and substantial cash payment.

The paper which won this outstanding recognition for Mr. Boyer reviewed the past quarter century of the manufactured gas industry, forecast type and composition of the tremendous gas loads ahead for the next few years and presented an authoritative evaluation of the economics of the various gas manufacturing processes available today. It contains particularly valuable information regarding peak load equipment and processes.

## Gas Heating Progress

Three gas utility men were presented awards for individual achievement in the field of creating, maintaining and increasing customer demand for gas house heating.

H. P. Morehouse, assistant sales manager, Public Service Electric and Gas Co., Newark, N. J., was awarded first prize of $500 for his outstanding work in the upgrading of gas heating installations. Hall M. Henry, director, gas operations, NEGEA Service Corp., Cambridge, Mass., received second prize of $250 for his study of the economics of a high B.t.u. gas process with which to supply the heating load. Third prize of $150 was presented to W. H. Wise, manager, domestic sales engineering, The Peoples Gas Light and Coke Co., Chicago, Ill., for his sales and installation program for gas conversion burners.

H. P. Morehouse

Hall Henry

Mr. Morehouse was cited by the Jury for his thorough and constructive up-grading program which "could be used as a pattern almost universally for the betterment of the entire industry." It included work in the development of a Minimum Standards Plan for the control of heating equipment and its installation; the development of quality heating standards for architects and builders; and the design of a heating unit for low-cost basementless houses.

Mr. Morehouse's contributions to the A.G.A. Manual of Modern Gas Service, which was developed by a committee which he headed, were also judged to be outstanding. This volume was completed during the year and has become the national standard for specifying a first-class gas heating installation.

Mr. Henry was honored for his economic analysis of the factors underlying the decision of The Cambridge Gas Light Company to make and distribute a high B.t.u. gas using 100 per cent distillate oil. By doubling the plant and distribution capacity, this company expects to solve for some time the economic problem of supplying large additional volumes of gas heating loads. While not judging the possible success of the technical process involved, the awards committee felt that "the courage displayed in going-all-out for a process that had not been widely used in the industry would be a stimulus to others to install similar processes to meet heating loads."

The sales and installation program for gas conversion burners which won third place for Mr. Wise consists of a well thought-out plan which stimulates high quality, safe gas heating installations by means of a broad dealer program. Its essential features are a firm testing policy with a screening process to eliminate undesirable equipment before testing; the keeping of necessary service records; the maintenance of an effective sales engineering staff; and the refusal of the utility company to serve gas to unsound installations. Of 4,000 conversion burner sales in Chicago in 1946, this program resulted in sales of equipment 94 per cent of which the company had tested and approved.

This is the first year in which gas heating progress awards have been made. It is planned to continue the contest annually and to make five awards totalling $1,000 each year. The jury of awards consisted of Harold Massey, Gas Appliance Manufacturers Association, New York, Chairman; E. P. Kramer, Ebasco Services Inc., New York; C. S. Goldsmith, The Brooklyn Union Gas Co.; Clifford Strock, editor, Heating & Ventilating Magazine, New York; and W. M. Chamberlain, Michigan Consolidated Gas Co., Grand Rapids.

## Safety Awards

Representatives of four operating units of gas companies throughout the country received Merit Awards. The gas utility divisions which received this national recognition and their safe operation records are as follows:

Distribution District 4 of The Ohio Fuel Gas Co., Mansfield, Ohio, with 125 employees worked 3,390,641 consecutive man-hours from April 2, 1939 to Dec. 31, 1946 without a disabling injury accident.

The Fort Wayne Division of the Northern Indiana Public Service Co., with 178 employees worked 1,106,712 consecutive man-hours from June 14, 1944 to May 14, 1947 without a disabling injury accident.

The telephone system of the Equitable Gas Co., Pittsburgh, Pa., with 90 employees worked 1,047,986 consecutive man-hours from March 24, 1941 to June 30, 1947 without a disabling injury accident.

The Production Department, Lease and Engineering, of The Ohio Fuel Gas Co., Columbus, Ohio, with 70 employees worked 1,007,112 consecutive man-hours from Jan. 1, 1940 to March 31, 1947 without a disabling injury accident.

## Home Service Achievement

There were five winners of the nationwide A.G.A. Home Service Achievement Award sponsored by McCall's Magazine. Cash prizes totaling $1,000 and bronze plaques were presented to the winners at the second general session meeting.

Eleanor Lee Jones, supervisor of lectures and demonstrations, The Ohio Fuel Gas Co., Columbus, Ohio, received $200 and a bronze plaque engraved with the name of the winning department and company as the winner of Division A. This division included home service departments of three or more individuals.

Miss Jones was cited for an outstanding Home Service lecture program entitled "Selling Gas from the Platform," which contained many novel and effective features. Her comprehensive, well-directed program included lecture demonstration material and ideas under the following headings: "Foreign Foods with American Accents"; "Parties with a Flourish"; "Little Citizens with Big Futures"; "Recipes for Healthy Gas Appliances"; "Junior Cook's Breakfast Club"; and a "Cooking College for Brides, Business Women, Beau Catchers and Post Graduate Cooks." Special demonstrations on the care and use of the gas range, pressure sauce pans and other pertinent topics.

Gladys V. Bramblett, home service director, Fall River Gas Works Co., Fall River, Mass., was presented with $200 and an engraved plaque as the winner of Division B which was confined to Home Service departments of three or less workers.

Operating a "one-man" department in a territory with nearly 30,000 residential gas customers, Mrs. Bramblett reached nearly 5,000 persons directly with a variety of material and ideas designed to promote interest in modern gas equipment in the home. Her activities in-

Cited for outstanding accomplishments in Home Service Activities during the past year. Left to right:—Helen F. Vernon, Florence M. Hundley, Eleanor Lee Jones, Mrs. Gladys V. Bramblett, and Kathryn O. Johnson.

cluded home calls to all purchasers of new gas ranges, new-range-users classes, club group cooking schools, equipment demonstrations in schools, and menu planning. An effective promotional idea sponsored by Mrs. Bramblett is a series of "Sales Clinching" classes where salesmen's prospects are invited to the utility's demonstration kitchen for dinner.

Three awards of $200 each and bronze plaques were presented in Division C which was confined to individual Home Service Department members who were judged to have contributed the most original and practical ideas toward the advancement of modern home-making through the use of modern gas equipment. The winners in this division are Mrs. Florence Hundley, home service director, Southern Counties Gas Co., El Monte, Calif.; Mrs. Kathryn O. Johnson, home service director, Rockland Gas Co., Inc., Spring Valley, N. Y.; and Helen F. Vernon, home service director, The Manufacturers Light and Heat Co., Bellevue, Pa.

Mrs. Hundley's idea was a highly successful sales-slanted series of Home Service cooking classes in certified dealers' store. Starting with a noon-day luncheon and open house at which modern gas appliances were viewed, these events continued with a manufacturers' party and class meetings at night.

Home Service helps to GI brides won an award for Mrs. Johnson, who set up a Kitchen Clinic program and other aids for the extensive GI housing development residents in her company's territory. Local civic and business leaders cooperated in the activity which centered around eight cooking classes at which prizes and other attractions were a part of the program.

The third award for original and practical ideas went to Miss Vernon for originating a well-developed timely program to aid in the modernization of "hard-to-work-and-teach-in" Home Economics Departments of schools. This program included a survey of gas equipment installed in the area, calls on school officials and work with builders and architects who were engaged in remodeling school buildings.

# Accounting Section

The program covered practically every phase of utility accounting. The first meeting was on October 6th, and the chairman was A. W. Hatch, Coordinator, General Accounting Activities Group. The subject discussed was "General and Property Records Accounting."

A joint A.G.A.-E.E.I. taxation accounting meeting was held in the afternoon. The chairmen were C. H. Mann, Chairman A.G.A., and W. S. Alt, Chairman E.E.I. The meeting was a Round Table Discussion of Current Tax Problems Including Procedure and Technique Involved in the Preparation of a Federal Income Tax Return.

The Material and Supplies Accounting group, and the Customer Accounting Activities group also held meetings on Oct. 6th. These groups all held meetings on October 7th.

The Accounting General Sessions Luncheon was held October 8th, and continued through the afternoon.

The following papers and reports were distributed at the meetings:

The Training Program for Office Workers by J. P. Flemming.

Property Records Committee Report on Determination of, and Accounting for Construction Overhead.

Uniformed Meter Readers — A Survey of Company Practices.

A customer's View of Some Accounting Forms.

Collection Correspondence.

Report of the A.G.A.-E.E.I. Project Committee on Budgets.

Suggested Revision of the Uniform System of Accounts for Natural Gas Companies With Respect to Accounting for Natural Gas By-Products.

Copies may be had at A.G.A. headquarters, New York.

### Northern States Power Co. Elects Braheney, Pres.

At a recent meeting of the directors of Northern States Power Co., Minneapolis, Minn., Bernard F. Braheney was elected president. He was formerly vice-president and treasurer and succeeds the late T. D. Crocker, who died recently.

Braheney started as an employee in the accounting department of the Stillwater office and has been directly or indirectly associated with the company since 1910.

In 1920, he joined the Public Utility Engineering and Service Corp. His duties consisted principally of financial and accounting counsel to various companies, including the Northern States Power Co. He joined the company in 1942 as vice president and treasurer.

Henry C. Cummings, former vice president in charge of operations, was elected first vice president and will continue in charge of operations.

Cummins joined the company in 1911, serving in various capacities until 1917, when he became a member of the operating divisions of Public Utilities and Service Corp. He rejoined Northern States in 1939 as chief of operations.

# Tenth Annual Wassail
# Gild of Ancient Supplers

Above are some of the Wardens, Burghers and Supplers who attended the Tenth Annual Wassail. Included in the groups are:—
1—Warden Jack Post, Elmer Cone, Past Mayor C. E. Bartlett, Jack English, John Klumpp and Ned Ramsey.
2—Senior Warden Sorby and Clerk Van Norden flank another group.
3—George Velte, John Tullin, John Willis, A. D. Mattarese, John Eichenbrot and Dana Murphy.
4—Major Forward, Alan Harris, Ken Clark, Chas. Ziegler, Jim Moffat, Charlie Davis, E. E. McGraw, Ben Lear and L. W. Timberlake.

SOME 275 Burghers and Supplers gathered Monday, Oct. 6th, at the Mid-Day Club, Cleveland, for the tenth annual Wassail of the Gild of Ancient Supplers. A buffet supper was served and the gathering broke up in time to attend the President's Reception and Dance.

Entertainment was furnished by the Ohio State Champion Barber Shop Quartet, and a highlight of the evening was the first public singing of the "Wassail" song, an old English tune discovered and arranged by Carl A. Schlegel, United Engineers & Constructors, Philadelphia, Pa.

**Joe A. Mulcare, Mayor**

At the annual meeting of the Gild Monday afternoon, Joe A. Mulcare, Mulcare Engineering Co., New York City, was reelected Mayor for the coming year. Other officers elected were:

Senior Warden E. Carl Sorby, Geo. D. Roper Corp., Rockford, Ill.; Clerk John Van Norden, American Meter Co., New York City; Keeper of the Treasure Glenn H. Niles, consulting engineer, Ridgewood, N. J.; Aldermen Joseph A. Messenger, Buell Engineering Co., New York City; George P. Velte, American Stove Co., Boston, Mass.; and Wayne R. Smith, Continental Water Heater Co., Glendale, Calif.

The Gild voted to hold its 1948 Wassail on Monday evening, Oct. 4, first night of the American Gas Association convention, at the Madison Hotel, Atlantic City, N. J. Mayor Mulcare will announce his appointments of sergeant-at-arms and regional wardens in the near future.

# Progress IN HIGH PRESSURE

NOW!
Stacey Brothers announces A-frame center-suspension. Combined with all-welded construction, it gives you the simplest, safest in high-pressure storage tanks.

10 years ago:
Stacey Brothers pioneered the use of all-welded construction in the unique Stacey Brothers "Bullet" and four-pier suspension.

20 years ago:
Stacey Brothers pioneered the "Bullet" type of high-pressure storage tank, requiring the multitude-pier supports shown.

## PIONEERED BY STACEY BROTHERS

Here's definite progress in the high-pressure storage field. Forget about expensive foundations, distortions from welding and leaks due to pressure changes—the new Stacey Brothers center-suspension construction takes care of that. Operation is easier, too—with less maintenance.

Designed and erected so that all field welding is done in a "down-hand" position for capacities up to 500,000 cubic feet—and pressures up to 100 pounds—you can't find a safer, more satisfactory, more *sightly* storage tank than the famous Stacey Brothers "Bullet". We've been building them for more than twenty years—both horizontal and vertical styles—for gases or liquids.

Like more facts? Tell us the size and pressure you need—we'll do the rest. No obligation, of course.

STACEY BROTHERS GAS CONSTRUCTION CO.
*One of the Dresser Industries*
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Stacey Brothers TANKS

# Progress Demands Responsibility

By
**R. H. Hargrove**
President, American Gas Association
President, Texas Eastern Transmission Corporation

MANY forces are at work in America today which make the responsibilities of our country and its every element greater than they have been for decades. Each passing moment increases the interdependence of our economic activities. What Walter Lippman has called the "acids of modernity" are eating into our former complacent businesses and undermining some age-old philosophies. Today as never before our industry and every individual in it must measure up to his responsibilities or fall by the wayside.

It behooves us to examine our industry in the light of these changes and see where our personal and corporate responsibilities lie and how best we can exercise them. We must clearly discern the new patterns the "acids of modernity" are etching and direct our thoughts and actions accordingly. Where does our industry stand today? What are its responsibilities? What path should enlightened leadership take? As custodians and trustees of our companies we must answer these questions before we can take advantage of the tremendous opportunities which exist.

### Revenues

Our industry now stands at the peak of its activities. It serves 20,600,000 customers and a population of more than 95,000,000 people. Its revenues amount to one and one-quarter billion dollars annually, the highest ever recorded. These higher revenues, however, are not in all instances accompanied by corresponding increases in net income. On the contrary, the skyrocketing costs of raw materials and labor have produced for a substantial segment of our industry the worst operating ratios of the past decade; however, rate adjustments, in many cases already applied for, are expected to alleviate this situation. The trend brings into sharp focus our increased responsibilities to our customers and our investors, and the need for industrial statesmanship of the highest order.

*Presented at 29th Annual Convention of American Gas Association, Cleveland, Ohio, October 6, 1947*

R. H. Hargrove

Significantly, following the restricted war activity, the total amount of new security issues of gas utilities reached a twelve-year peak of $1.2 billion in 1945 and then declined to $640 million in 1946, probably due to lack of available materials with which to expand. The average cost to gas utilities of bond money continued its general downward trend in 1946, reaching the lowest level recorded in the 12 years for which data are available; the weighted average cost for 1946 for all bonds issued was 2.74 per cent which compares favorably with the cost of equivalent securities for other industries.

### Expenditures

Construction expenditures of gas utilities reached a peak of $310 million in 1946, an increase of 93 per cent over the previous year. Of this amount $117 million was spent for natural gas transmission facilities to attempt to satisfy the great demand for this fuel in industrialized areas. An estimated $730 million will be spent by utilities for new gas facilities in 1947, with more than half of the total going to natural gas transmission. More than 320,000 miles of mains were in use by the gas utility industry at the end of 1946, a gain of 10,140 miles over 1945.

Employment in the gas utility industry reached 133,600 in 1946, a gain of 13 per cent compared to the previous year and only five thousand less than the all-time peak in 1941. Weekly wage rates advanced to the highest level in history.

So much for the physical inventory of the gas industry, and its recent advances. Where do we stand in the public's mind and how well have we acquitted ourselves in meeting our obligations to our customers? And, more important, are we contributing to the national welfare and the general advancement of the country?

### Gas Outranks Other Utilities

Fortunately, our industry has taken steps to secure the facts before charting a course and has in its possession an authoritative barometer of public opinion. A nationwide survey completed last October established the fact that the gas industry ranks favorably in the public mind in comparison with the two other principal utilities. Gas outranked these utilities in excellence of service and our companies were rated ahead in courtesy shown by employees in dealings with customers. On the question of rates, more people thought gas rates were reasonable than was true of the other comparable utilities.

This seemingly satisfactory record is no cause for complacency or self congratulations, however. The margin in each case was small and since that survey was made a winter of gas shortages has intervened and the industry has been buffeted about in the public press and has suffered some loss of prestige because it has not told its side of the story as promptly, completely and effectively as it should have done. We are faced with a similar situation this winter and for the same reasons. We must meet this situation squarely. The public has a right to know the facts and we have a definite responsibility to supply them. Indeed, if we do not supply them we will suffer an irretrievable loss of goodwill—and rightly so!

### Public Confidence

Here then is a trouble spot that calls for immediate action lest our future progress be endangered through lack of foresight and resourcefulness in dealing with a purely temporary situation. Let us take the public into our confidence. The public is reasonable but must have the facts with which to reason. If any company is facing demands greater than its system can meet, let us use every channel of communication at our command to tell our customers the facts of the situation. The truth of the matter is that there is no shortage of gas and never has been. There is only a shortage of distribution and production facilities due to a shortage of materials—principally steel—with which to make pipe, compressors, gas manufacturing equipment, and other means of expanding to meet the unprecedented demand for gas service.

Positive action should not await actual suffering but conservation measures should be taken beforehand and through proper publicity our customers prepared for such contingency. If in the final analysis we are forced to curtail we should have a carefully considered plan of curtailment which will cause the least inconvenience to our customers.

### Supply Temporarily Restricted

Management has a heavy responsibility in selecting those customers whose supply must be temporarily restricted. While cooperation with regulatory authorities is essential in these instances, management can ill afford to disclaim responsibility and look to such agencies for a complete solution of the problem. Naturally, our residential and commercial business, as it affects the most people and will wreak the most hardship, should suffer the least inconvenience. But if by careful planning and exerting the utmost resourcefulness, we can preserve our industrial business intact, so much the better.

Here I'd like to say a few words about the importance of this industrial load. Particularly during the war and postwar periods, natural gas became an indispensable part of many industrial production operations. This extraordinary fuel now has an essential character to production in modern industry and makes possible such economic advantages as ability to pay higher wages, provide better working conditions and at the same time produce better and more products at less cost. As the gas industry has made such an outstanding tool available to general industry, it necessarily has incurred responsibility for continuity and adequacy of service, since many industries must depend completely upon a service around which it has built its industrial heat applications to the exclusion of any other fuel. In the heat-treating and chemical industries these applications have progressed to such an extent that in many instances operations are stopped cold whenever such natural gas supplies are not available.

It is not a question of whether we have a moral responsibility to industries to continue to serve their needs. The facts we must consider are that our industries are dependent upon gas and that the communities we serve are in turn dependent for their well-being on the retention and prosperity of these industries. Of course, it is normal and sound natural gas operating practice to maintain pipeline load factors by contracting for a certain amount of interruptible industrial business.

We cannot, however, arbitrarily shift loads or load factors as we might wish to do. We have to be sure that whatever we do to effect changes will not disrupt the highly complex economic fabric upon which our business and communities are built.

The snowballing demand for gas house heating has created special problems and in many cases accentuated local gas shortages. The current practice of part of our industry of prohibiting or discouraging the installation of heating equipment cannot be held indefinitely, and our plans must contemplate the eventual handling of this load in a satisfactory manner whether we like it or not. To minimize the effect of this load upon our investment and our operations, it is desirable to seek a compensating and balancing summer load, such as gas air conditioning, and to build our industrial load so that heating sales represent a lower proportion of the total sales.

Some of us have been too ready to admit restrictions to our growth and to define the limits of our progress. This is a short-sighted and unrealistic frame of mind. Any limits to our growth exist only in the minds of those who are too bound by outmoded methods to recognize the great opportunities that are knocking frantically at our door today. The American gas industry faces a challenge and an opportunity without precedent. That opportunity will be grasped only to the extent to which sound public relations are established and sound service policies are maintained during this temporary period of short supply.

### Obligation to Serve

I re-iterate, while we may have to accept temporary curtailments, in the final analysis we have an obligation to serve whatever demand exists. We should be more than pleased that the American public has placed its unmistakable stamp of approval on gas as the most desirable of all fuels by greatly over-buying it—even under present conditions. Can we ignore or thrust aside this challenge? The answer is in our hands and so is our future.

When stating our case to the public we should take special pains to shatter forever the specter of a limited supply of gas. Our resources include proved recoverable reserves of 160.6 trillion cubic feet of natural gas as of the end of last year, or an increase over the previous year of 2½ times the annual production. Year by year our estimates of natural gas reserves have increased until today they represent an advance of 600 per cent over 1925, 160 per cent above 1934 and 90 per cent more than 1940. In the meantime tremendous quantities of gas have been taken from nature's storehouse. Does that sound as though natural gas was in short supply?

### Our Resources

Our resources also may be counted in terms of oil and the almost inexhaustible supply of coal—the raw materials of manufactured gas which hold a veritable treasure house of chemical wealth for the future. These basic materials for gas manufacture are now being subjected to the most intensive research efforts the world has ever known. Our own Association has an unprecedented program of gas production research while great new experimental work is under way at such plants as that of the Pittsburgh Consolidation Coal Company, of which you will receive a firsthand report at this convention. Under these circumstances can anyone question the certain development of improved gas-making processes or the relative permanence of an abundant supply of gas?

We are in the fortunate position today of having made substantial advances on the competitive fuels scale simply by virtue of a change in the economic position of some of our principal competitors. Both manufactured and natural gas have stepped up the scale through the relative stability of their prices while the prices of other fuels soared. Indicative of the trend, Bureau of Labor Statistics data show that 1946 retail

prices of coal and coke were more than 40 per cent above the 1935-39 base period, while the cost of fuel oil advanced 39 per cent. Notwithstanding increased costs of operation, the average retail price of gas during the same period dropped 5 per cent.

### Facing Economic Changes

There are many signs today that we ourselves are facing an economic change in our markets. Indications are that new demands will be made upon us which may require new concepts of service and regulation. Already there is evidence that gas may find unexplored markets in the chemical field. Public acceptance of gas as the ideal fuel is growing so rapidly that its desire for greater service and its ability to pay for it must be reckoned with.

The pulse of the nation's economy is beating rapidly. Whether it is momentary high blood pressure due to a temporary stimulation or a permanent condition due to adjustments in the body economic it is difficult to say. Be that as it may, the national income has risen from 81 billion dollars in 1940 to 178 billion dollars in 1946, and 1947 is estimated at nearly 200 billion dollars. Today's index of manufacturing payrolls, with 1939 as 100, approximates 320. In addition to this it is indicated that by 1950 about 4 million new purchasing units will appear in the income group above $5,000 per year.

Allowing for adjustments in the value of the dollar, it is evident that our industry and every other industry faces an era ushering in new standards of living and that the time has arrived to begin thinking of new standards of public acceptance of gas. This could mean an overhauling of rate structures, with service and regulation which would sanction as prudent investment the cost of such facilities as are necessary to meet the demands of an all-out market in a new era. Certainly, the marketing face of America is undergoing profound changes which are already being reflected in our business and must be carefully considered in our calculations. Only the other day I read the report of a national publication which said that skilled wage earners on an average now get as much as or more than experienced and trained white-collar men.

Now of course the question might well be asked whether we are to maintain incomes at the present level and whether potential buying power will be so influenced by other items of the cost of living and bids for the consumer's dollar that the gas industry's market will remain unchanged. Most authorities agree that we are in for a long period of high incomes. Whether we get our share depends upon the willingness of our industry to accept the challenge of change.

To evaluate and capitalize upon these new potential markets the gas industry must look through the right end of the telescope to see what lies ahead. The image may be magnified but it will indicate what we must build for and the services we must provide. We must raise our sights to new horizons in a new era.

### Rate Structure

One of the greatest incentives to progress and development of a utility business is a sound rate structure. Most gas rate structures are more than ten years old. Perhaps they need an overhauling. They need a better balance between rates for various types of load. They need increased prices for that type of load which creates bad load factors and higher costs.

### Creative Selling

Another factor that now demands our full attention is the development of a highly effective degree of creative selling. The day of the order-taker is drawing rapidly to a close. Our utility sales forces are estimated at only 30 per cent of prewar strength. This is a dangerous situation. One leading gas appliance manufacturer has estimated that if any gas company wishes to maintain its strong competitive position in the field its present sales force must be raised to at least 150 per cent of prewar levels. This means the average gas company must employ 50 per cent more salesmen—and better salesmen—then it has ever placed before on the sales firing line. The time for recruiting and training these sales forces is now! Successful sales organizations cannot be extemporized.

Even before we have perfected a sales organization with which to meet the full competitive challenge which surely awaits us, we can do much to prepare the way for greater sales. I know of no better way than to bend every effort in support of such far-reaching cooperative endeavors as the current "Gas Has Got It" promotional program.

Because the gas industry has become a universal and essential industry whose performance affects the lives, happiness and progress of millions, our watchword must be "service." One of our primary responsibilities, therefore, is to see that every individual in the industry not only believes in the doctrine of service but also faithfully practices it.

### Industry Self Regulation

As an example of what can be done to fulfill our national responsibilities, I'd like to call attention to a step in industry self-regulation which to my knowledge no other industry has seen fit to adopt. The establishment of an official Testing Laboratory at great cost to our industry marked one of the most progresisve steps ever taken by any industry in raising the standards of its public service.

Contrary to the procedure adopted by most other approval laboratories, the work of our Association, through its official testing agency, is based almost entirely on public standards or specifications. Impartial experts outside the industry cooperate actively in preparation of these standards and the results can be verified at any time by competent experts.

The approval requirements as they are drawn up are minimum requisites for satisfactory performance, substantial and durable construction and safe operation. In their preparation sight was never lost of the necessity of providing every opportunity for manufacturers to improve their appliances and to embody individuality in their construction. It was overall efficiency and safety in which the Association interested itself.

### CP Trademark

Another consumer standard which is gaining stature as an unbiased buying guide is the "CP" trademark backed by 20 leading gas range manufacturers and 1,200 gas utilities. Here again the gas utility industry supplied the initiative and originated the high standards of automatic cooking performance that have been instrumental in placing higher quality ranges in the hands of its customers. That the manufacturers adopted this program wholeheartedly and are carrying on with unstinted effort is a tribute to their cooperative spirit and public consciousness.

Since we as an industry are judged not alone on the quality and reliability of gas service but upon the performance of the appliances which are placed in our customers' homes, we must do everything in our power to encourage the sale of high quality appliances. This means not only wholehearted support of the A.G.A. testing and certification program but support of the "CP" program and any other program which has a

*(Continued on page 66)*

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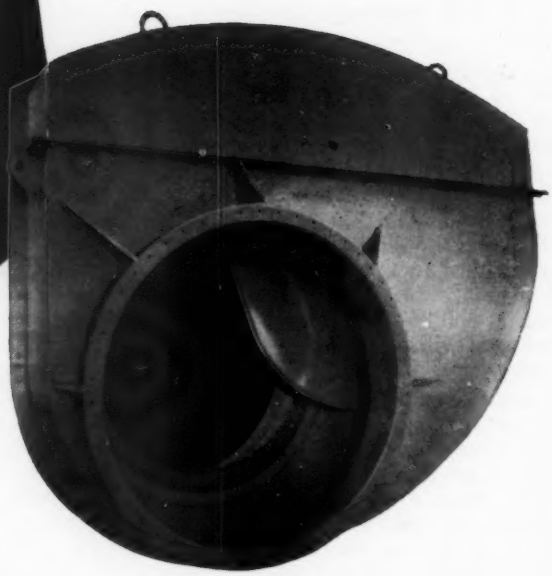

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# What Natural Gas Can Do for the Manufactured Gas Industry

By
**Hugh H. Cuthrell**
Vice President
The Brooklyn Union Gas Company
Brooklyn, New York

I WOULD like to open my talk by telling you a little story. It happened when the very painful coal strike during the spring of 1946 had been in progress for quite a long time. Our company was nearing the critical point of exhausted coal supplies and every day we would, figuratively speaking, count each lump of coal in our dwindling stock pile. At the height of our worries, a reporter for a New York paper called my office. He was *really* excited.

"Say," he exclaimed, "I just heard that natural gas will be carried over the Big Inch pipe line to the New York area. How long before you will be able to distribute it in Brooklyn?"

"My best guess is about 1950", I said, "but only provided there's an available source of natural gas, that pumping equipment is found and that the price is right."

"Well," I could hear him deflate at the other end of the wire, like a punctured balloon. "Oh," he said, "I thought it would be in a few days."

As I got to thinking about his question I realized that even if we could get natural gas to the Eastern seaboard with any kind of magical speed it still wouldn't be the complete answer for *all* our problems. However, plenty of the things that are vexing us today in the manufactured gas industry could be solved in large measure with natural gas. The most important immediate benefit hits us right where we live—right in the pocketbook. Because in the long run, natural gas would provide us with the means of so reducing our operating costs that we could not only earn more income but we could price our fuel better to meet competition, because, in my judgement, the future health of this industry depends upon the ability of gas to meet the price of competitive fuels.

My topic, "What natural gas can do for the manufactured gas industry," is a large order, and yet it's certainly not new. You've probably heard or read many comments on the subject. And you will appreciate, I'm sure, that all sorts of factors alter the situation from company to company. I would like to deal with the broad general advantages of natural gas in manufactured gas company operation as we see them and in a lesser way with some of the problems that go along with a change-over. I would like to give you, too, a concrete idea of what it could mean to a company like Brooklyn Union which is operating far from the source of natural gas supply and which has a heavy capital investment in the manufactured gas business.

We all probably faced the post-war period with our blue-prints and planning sheets carefully worked out. We in Brooklyn felt (as probably you did too) that given half a chance on materials for expansion we could keep abreast of demand. I hope you were a lot closer to the fact then we turned out to be. In the first place our capacity estimates were predicated on a projected demand five years after the end of hostilities. At the close of the *first* post-war year we found that our estimated five-year peak day demand at zero temperature had already been reached! That was really getting little or nothing out of our crystal gazing, wasn't it? Our revenues from this demand were up and *naturally* we expected that costs also would rise but we got a good deal more than we bargained for. We'd no more than gotten underway when construction and operation costs began to skyrocket. And along with rising prices came delays. On top of all this was this staggering customer demand that all of us had. In 1937 we would have loved it, but today it makes us sit up nights and worry.

In any case by early 1946 Brooklyn Union had been able to add 20,000,000 cubic feet to its daily water gas generating capacity. We followed this with the installation of a liquefied petroleum plant which was completed and in operation during the last part of the 1946-47 winter. To get more capacity, we started a second expansion program in the fall of 1946 which was set for completion during 1948 and which would add another 30,000,000 cubic feet daily capacity. But in spite of all this we can already see the need of adding still more plant. And don't think this stuff comes cheap either. At present we have authorized about twenty-five million dollars' worth and the end isn't in sight. If we were gaining on the demand it might be all right but that isn't the case so two alternatives had to be considered by the company.

1. **Continuation of further expansion of its manufactured gas facilities for many years**

**or**

2. **Some additions to manufactured gas facilities plus the utilization of natural gas.**

We have all been aware of the benefits natural gas has brought to other areas for many years. We have all known that there have been some exhaustive studies of natural gas resources which indicate that proved reserves approach one hundred fifty trillion cubic feet. But until recently for those of us who have been a long way from the source of supply our thinking about it has been largely academic.

It's only in the last year that we in Brooklyn Union started a continuous study of the possibilities for us in the use of natural gas. We were a little like Gilbert and Sullivan's lady from the provinces in "The Mikado" who

**"Doesn't think she dances**
**But would awfully like to try."**

Our surveys on the subject of natural gas have had a decidedly heartening effect on our outlook for the future. Especially since we know that in the past the union of natural gas and manufactured gas interests has always meant sound expansion and an improved position for the manufactured gas utility.

We have reached a point in the manufactured gas industry where we have to change our entire concept of our business. We have to adjust our thinking to ever-expanding capacities. This is not just a problem for '48, '49, '50 or '51, but one for the many years ahead if we are to stay the

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*Presented at American Gas Association Twenty-ninth Annual Convention, Cleveland, Ohio, October 6, 7, 8, 1947.*

dynamic industry in the American economy, that I am convinced is our destiny. In 1936 our company decided to really reach for the house heating business and we went after it hammer and tongs with promotional rates and hard selling. For us it was to a large extent, a venture into new worlds, but we knew that we had to open up that field in Brooklyn if we were to stay an expanding company. Our fifteen-odd-thousand heating customers who were on our lines at the start of the war were completely sold on the comfort and economy of gas heat. What a sales story they must have given the other three million people in our town! Because now we have a tiger by the tail. We simply can't meet the tremendous demand that exists today. There's nothing new about that story to anyone here. We all hate to turn our backs on the best market we've ever had. With new home construction growing, and with the modernization of many existing homes underway or at least planned, the truth of our position is that we've either got to meet this demand without delay, or we've got to stand by and watch this business go to our competitors.

How to supply this new load under present-day conditions at a proper capital and operating cost is a challenge to every company, especially a manufactured gas company. In my opinion natural gas provides a God-given answer to a large part of the challenge.

So let's see how natural gas can help us. In examining the advantages of natural gas naturally you have to look at it in the light of your local situation and any company has to weigh each aspect of its case before it jumps. Variations on each point will probably occur to you, but in the main I believe we will find common ground in the following benefits:

### Effect on Fuel Costs

1. With natural gas there can be very substantial operating economy in fuel costs. Our calculations indicate that we could hope to effect an annual saving of approximately four to five million dollars through the use of natural gas. The exact cost of natural gas to my company cannot, of course, be any more than "guestimated," but with the costs of all raw materials rising and with the present price of natural gas ranging between 2 cents and 3 cents a therm, natural gas apparently offers a material saving in fuel cost, roughly equivalent to 10 cents per MCF of 540 Btu gas. Since fuel is a major component of a manufactured gas company's expense you can see where it leads. It can make the difference between holding to a competitive scale of rates, or going to rate increases which can be extremely serious to the competitive position of the business. Or it can mean the difference between operating in the red or earning your stockholders that reasonable return they are so justly entitled to.

Oil costs have gone up even faster than coal. We are paying today five times what we were paying for refinery oil when we first began to use it in 1932. The cost of gas oil has doubled in the same period; the cost of heavy oil has doubled in a comparable period. And so on. Everyone knows that picture! With the expanding demand for petroleum products, companies are experiencing difficulty in contracting for an adequate supply of oil. Furthermore, even when you can get a satisfactory supply it may be necessary for the gas company to accept a type or grade of petroleum product which, in cost or chemical characteristics, isn't suitable for gas manufacture. An adequate supply of natural gas will push that particular problem in the background.

### Production Capacity

2. As a second major point.

A critical production capacity problem will be relieved by the advent of natural gas.

a. Natural gas provides the means of increasing production at low investment cost.

b. Where it is available, natural gas provides capacity quickly, and companies in general will be able to take on new business at an accelerated pace. Not only can this be done more economically with natural gas, as has been suggested, but it can be done more promptly since the financing and installation of extensive additions of water and gas manufacturing apparatus, amounting, in many instances, to the erection of whole new gas plants, is a time-consuming process. Our own experience bears this out for our program has had one exasperating delay after another from the very beginning.

c. Flexibility in utilization is an important factor in achieving this new capacity.

It can be used in the manufacturing process in a number of ways and I'm sure this audience knows the ins and outs of this much better than I do. But as an example the cycle used in generation can be varied widely depending on the flame characteristics—or Btu content—or specific gravity that the company needs to distribute. The proportion of natural gas used for cold enriching can be changed. If necessary, under certain conditions, a mixture of air and gas of the proper final Btu content can be introduced, either at the plant, or at other plants in the transmission system so that with a minimum of disturbance to plant operations, the make of the plant can be adjusted to meet any given set of operating conditions which may arise.

The use of water gas generators to reform natural gas permits an increase in over-all generation capacity, of any given Btu content, over that attainable by the carburetted water gas process.

Another possibility of providing cheap generating capacity with the use of natural gas is through the use of existing low-cost producer-gas apparatus. Producer gas can be used as a dilutant if the proportions of the final send ou gas includes a high percentage of coke oven gas or other fast burning gases.

The supplementing of manufactured gas capacity by peak-load liquefied petroleum plants at relatively low capital cost is equally possible after the plant has been converted to the use of natural gas.

### Storage and Distribution

3. The third major advantage of natural gas is the effect on the storage, transmission and distribution system. The use of natural gas as an enriching agent permits selection from a wide variety of Btu levels. Any increase in Btu content from the 520 to 540 standard usually adopted by manufactured gas companies, will, in most cases, yield additional "free" transmission storage and distribution capacity and reduce pumping costs. The selection of the Btu level ultimately to be reached by a company converting to the use of natural gas will depend on a number of factors, such as the degree to which the company wishes to be dependent on natural gas supply, the problems and cost of a comprehensive and wholesale conversion of appliances which incidentally is in many cases necessary only when 600 Btu per cubic feet is exceeded, and the nature of the existing manufacturing plant.

### Insurance of Supply

4. The continuity of supply for the company and the consumer is another attractive dividend accruing to the use of natural gas. With natural gas available to your plant your customers have hope of complete continu-

ity of supply because you have a raw material which should be "strike-proof". In these times which are characterized by labor-management maladjustments the use of natural gas would certainly help to insure a steady supply of gas on your district mains. From a public relations point of view as well as from the fact that we are a business operating in the public interests, we have a definite obligation to our community —to maintain service in spite of our difficulties in obtaining fuels and here is where natural gas can help.

### Labor Costs

5. Greater productivity from labor. Many of us are watching labor costs anxiously. We know that excessive production labor too often is the factor that makes the difference between a sound earnings position and red figures so we all have to find some way of making labor more productive.

One of the principal problems in recent years in gas plant operations has been the maintenance of a satisfactory force of unskilled and semi-skelled labor to do the "bull work" of gas making, such as fuel handling, clinkering and yard labor. A higher proportion of natural gas in your gas-making operations will reduce appreciably the requirement for labor of this sort.

### Rate Stabilization

6. It is fashionable at present to believe that prices will continue upward. It's mighty easy to fall into the error of thinking that because prices are rising, they will always continue to rise. Admittedly we are now in a tough inflationary period, but inflation always has been followed by deflation. But when utility rates are inflated because of high plant costs it's pretty hard to get them down again. We don't want to have to raise our rates to such an extent that we can be priced out of our markets. What we *do* want is aggressive growth with a price on our product that people can pay. In many instances, the use of natural gas in our operations may be the stabilizing force which will keep rates from rising too far and staying up there too long.

Added to these very attractive major possibilities, there are many intangibles which vary from company to company, but surely belong in any summing up I may do.

For example, we believe that over the years we will experience less appliance servicing difficulties due to the greater ease of keeping a mixed gas clean.

### Effect on Service

If we in Brooklyn Union use natural gas, we'll probably send out a mixture of less than 650 Btu. We believe that we can go to that Btu content without extensive and expensive change-over on appliances. Appliance change-overs in this day of high labor costs are nearly prohibitive when you're thinking in terms of 850,000 customers and this consideration has had considerable influence on our thinking.

Another intangible is that we should get longer life out of our meters.

Picking up additional main capacity, too, might well enable us to put off for a while the arduous and expensive work of opening up streets constantly—we might well be able to postpone some of these operations and it would be a blessing both for us and for thet community if in these times we could leave all of the heavily congested streets free for traffic. Another minor benefit, but one which helps us to be good citizens, is that we can help the city in its smoke abatement campaign by making more coke available for industrial use.

Here's hypothetical or at least theoretical example of what natural gas could do for our company. When our present expansion program is completed in 1948, we will still fall short of 1950 foreseeable peak day demand by 35,000,000 cubic feet.

### Investment Economy

The estimated cost to us to build the plant required to provide an additional production capacity of 35,000,000 cubic feet of 540 Btu gas for Brooklyn Union by the year 1950 is $4,575,000 or approximately $131 per MCF of additional capacity, and I'm talking about building oil-gas plant. If we had to build carburetted water gas sets or coke ovens that figure would be doubled or tripled. On the other hand, if 52,000,000 cubic feet per day of 1,000 Btu natural gas is made available to the company, after our present construction program has been completed and before 1951, the plant capacity would be increased 68,000,000 cubic feet on an equivalent 540 Btu basis. The estimated cost of constructing a transmission line in the company's territory to bring natural gas to the company's plants from the pipe line is $2,452,000 or approximately $36 per additional MCF on an equivalent 540 Btu basis. We figure that the cost of additions to the company's distribution facilities would be the same whether the additional plant capacity were provided with manufactured or natural gas, so that has no bearing on our figures.

So Brooklyn Union, convinced as we are of the advantages of turning to natural gas, intervened in the hearing of the Trans-Continental Gas Pipe Line Company before the Federal Power Commission. We wanted to point out clearly the advantages to the receiving utility of making natural gas available in Metropolitan New York. This proposed line would originate in Texas and would follow a route through the southwestern states avoiding the densely populated areas of the midwest. The line would serve the Philadelphia and New York markets.

It is the hope of the Trans-Continental people to make gas available to us by 1950. Of course, because there is no certainty of supply we must go ahead with our regular plans. However, we're trying to keep them flexible enough to absorb natural gas, if and when it comes.

### Some Problems

Before closing, it is only fair to say that the use of natural gas does present some minor problems. For example:

1. Once natural gas is in it is possible to develop new business too fast. This can lead to disastrous peaks, so, for example, we've got to be sure that house heating gas is not underpriced. Too low a price can bring about a runaway market which can quickly use up peak load capacity. If the load suddenly becomes unbalanced by too much house heating and if more natural gas were available for that load in the winter a company would be forced to reduce its dump-load rates in order to fill up the off-peak valleys. The final result is the sale of both on-peak and off-peak gas at rates below their full value of service. There's no profit in that!

2. Companies that have gone over to a mixed or natural gas operation stress the fact that interruptible business must be solidly sold as interruptible, so that the user will understand that the gas company is not making a firm commitment. The development of firm off-peak sales has been in most companies' experience a gradual process and required intensive sales effort. They advise that it's best to develop just a few large users. The summer water heating load in apartment houses is a type of business that we would seek in our territory, for example.

3. The customer relations aspects are exceedingly important. We certainly can't afford to inconvenience

our customers by causing a lot of pilot outages or flashbacks by careless switching of Btu values or specific gravities. I understand that help will be available when the technical advisory subcommittee on mixed gas research will complete its first study in this field by July of 1948. If a company is changing to a therm basis of billing, there must be careful customer education on the new unit of charge. The Washington changeover is an excellent example of splendid planning in advance in this regard.

4. We've got to keep plenty of manufacturing capacity available on a standby basis in the event of pipe line breaks and interruptions. A fourteen hundred mile thread from the source of supply is conceivably broken on occasion and we can't take many chances on interrupting gas service to the three million people that live in our territory.

Finally, all rates have to be reviewed and studied constantly after careful market surveys to determine a fair price for the gas that we sell.

In weighing the advantages and disadvantages, our company has been concerned with the effect of natural gas upon the multi-million dollar manufactured gas investment we now have. We've concluded that there is little cause for concern. In the first place, the potential demands for gas in the New York area, based on present loads, far exceed the estimated gas capacities of any contemplated natural gas lines. In the second place, the successful use of natural gas depends upon its price to us, which in turn depends upon our continuity of use. In order to buy natural gas on a good load factor basis, we'll certainly need to operate almost all of our present and contemplated manufactured gas capacity to relieve peak demands. And as I said before the location of our Company at the end of a 1,400 mile pipe line certainly indicates that we must retain all our present capacity. We've got to be sure of the continuity of gas service in the event of breakdowns or pipe line repairs.

### Future Outlook

I believe that when natural gas comes to us on the eastern seaboard we will be on the threshold of the greatest expansion we ever experienced. The stabilizing effect on a company's investment rating and earning power is a tremendously important feature that comes with this opportunity. The possibilities are dramatic indeed! This resulting load expansion will be accelerated by two things as we see it now: We'll be able to offer a richer gas at a slightly lower price, and 2, our customers, both domestic and industrial, will respond eagerly to the new uses of gas.

Volume-wise we will really move into high gear and as a public utility we will find a new means of extending our service. The way in which we meet this challenge is going to determine the future of the gas utility business, and I am confident that when natural gas comes to our town and gets mixed with the manufactured gas we'll go right on making, our future is assured.

### L. L. Dyer and O. H. Ritenour Elected to Controllers Inst.

L. L. Dyer, controller of the Lone Star Gas Company, Dallas, and O. H. Ritenour, controller of the Washington Gas Light Company, Washington, D. C., were elected vice-presidents of the Controllers Institute of America at that group's 16th Annual Meeting, held October 19-22 at the Drake Hotel, Chicago.

Herman W. Boozer, of the Georgia Power Company, Atlanta, and J. H. Clawson, of the Puget Sound Power & Light Company, Seattle, were named directors.

O. W. Brewer, controller of the American Gas Association, was reelected treasurer.

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By

Malcolm B. Mackay

The Burkay Company

## CHAPTER VIII—PART 3

### Initial Installation of Water Heaters and Water Heating Systems—(continued)

### (f). Recovery Water Heating Systems—(continued.)

(10) Correct determination of Required Water Heater Recovery Capacity and Hot Water Storage Tank Capacity — based on accurate estimation of Peak Hour Hot Water Demand, Duration of the Peak Demand Period in hours and Maximum Water Temperature Rise—does not, however, invariably result in the installation of a recovery type water heating system capable of supplying the required volume of hot water or of maintaining a stable hot water delivery temperature. An alarmingly large percentage of recovery water heating systems are prevented from delivering their potential capacity of hot water or from maintaining uniformly stable hot water discharge temperatures, or both, as a result of the fact that—in far too many instances — installations are made in conformity with installation diagrams or piping lay-outs in which are incorporated several antiquated design principles which hinder, if not prevent the equipment from recovering and/or delivering the rated capacity of hot water and which have only age to recommend them. A smaller but unnecessarily large percentage of installations are handicapped as a result of an apparent disinclination—on the part of those who install the equipment—to accept and follow improved features of system design which have been incorporated, in a lamentable minority of instances, in installation diagrams and piping lay-outs of recovery type water heating systems.

Apathy, indifference, or a smug complacency might, conceivably, be responsible for long continued acceptance and employment of certain elements of system design which effectually prevent full capacity operation of the equipment and may also be responsible for a seeming lack of conscious effort to introduce new or advanced elements of design which would correct old, outmoded practices and improve system performance. It is particularly regrettable that such sub-standard performance can reflect unfavorably on not only the equipment, but on gas as the most desirable fuel.

Failure to develop or advocate corrective procedures which would result in removing the handicaps under which an unnecessarily large portion of recovery type water heating systems are compelled to operate, would be understandable if such changes in, or improvements to, antiquated installation design or piping lay-outs involved obscure or complicated engineering principles. As a matter of fact, the shortcomings of the old system designs and the changes which would effect the necessary improvement in operation or performance should be readily recognized and understood by anyone who has even a nodding acquaintance with the fundamental principles of elementary, high school physics.

Here, it would, perhaps, be pertinent to observe that mediocre water heating equipment *having adequate capacity* and employed in the *correct type of system* in conformity with *correct piping lay-out* — and using even a *competitive fuel*—would most certainly be responsible for a far greater degree of customer or user satisfaction than would the finest, gas-fired equipment *lacking in adequate capacity* — employed in the *wrong type of system*—or installed in conformity with a piping lay-out which *prevented full capacity* or otherwise satisfactory performance of the equipment.

Correct System or Piping Lay-out can accordingly be one of three factors which may determine whether a Gas-Fired, Recovery Type Water Heating System provides—or fails to provide—hot water in adequate volume and at a uniformly stable temperature. Let us also not overlook the fact that the potential customer is investing his cash in a supply of hot water sufficient to supply his requirements and that he has every reason to expect that the hot water will be available in adequate volume when needed and at a uniformly stable temperature, if he accepts the recommendations of the seller of the equipment. The water heater manufacturer and the Gas Company have a definite and continuing interest in whether he gets what he pays for.

(11) In undisputed first place as the responsible cause for failure of a Recovery Type Water Heating System to deliver the *full, potential capacity of hot water*—and particularly to maintain a uniformly stable hot water discharge temperature—is that feature or element of design or layout of the inter-connecting piping between the water heater and the hot water storage tank which makes it necessary for the water to flow *simultaneously in opposite directions through* at least one *section or length of pipe* if the system is to function properly. While a genius may, at some future time, invent or perfect a pipe through which water may flow simultaneously in opposite directions, it is undoubtedly safe to assume that pipe of that type is not now commercially available.

That feature or element of design or piping lay-out which involves this *"two-way"* pipe principle is often inseparably linked with other design elements or features which may, to a greater or lesser extent, share the

responsibility for failure of the system to deliver the full, potential hot water capacity or to maintain a uniformly stable hot water discharge temperature. Among the inevitable results of such practices may be noted:

(a) Short circuiting of the so-called recovery circulation within the hot water storage tank.

(b) Vapor lock occurring in the hot, discharge recovery circulating line between the heater and the hot water storage tank.

(c) By-passing of the hot water storage tank.

(d) Abnormally high differential in temperatures of the water at opposite ends of the storage tank.

(e) Abnormally high differential in temperatures of the water at the top and bottom of the hot water storage tank.

(f) Resulting, abnormally high fluctuation in hot water discharge temperature at the point of use.

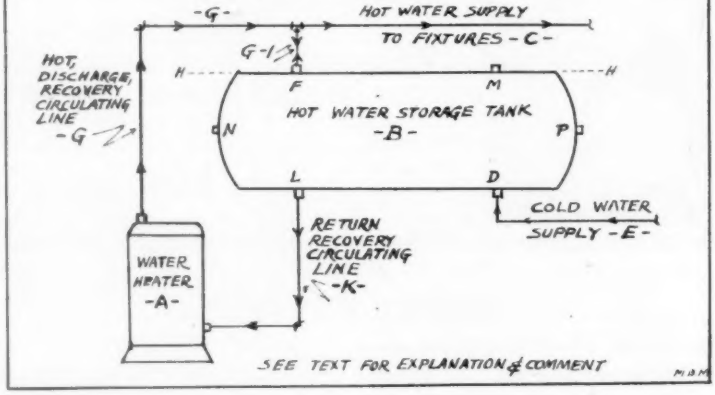
(12) Figure 14 will serve to illustrate a Recovery Water Heating System in which the *"two way pipe"* principle as well as other unsound and indefensible design elements effectually prevent the system from delivering the full, potential capacity of hot water or from maintaining a uniformly stable hot water discharge temperature. It *also*, most unfortunately, is typical of a majority of the installations to be found today in any community in this enlightened and progressive country of ours. While it is understandable that recovery water heating systems were installed in conformity with this typical piping lay-out in the dim and distant past, it is almost incomprehensible that it should survive—apparently without conscious effort being devoted to the possibility of correcting obvious short-comings or improving performance—until the present time, and that installation diagrams or piping lay-outs, containing one or more of the design elements which hinder, if not defeat the proper functioning of the equipment, should still be advocated and published by members or groups of an otherwise forward looking and progressive industry.

So—let us turn the spot-light on this typical diagram or piping lay-out of a recovery water heating system which is all too frequently employed and examine its many and obvious faults and its few, if any, virtues.

(13) Before taking this typical recovery water heating system lay-out apart for examination, it is obviously necessary that the analysis

FIGURE NO. 14

TYPICAL RECOVERY TYPE WATER HEATING SYSTEM EMPLOYING THE "TWO WAY" PIPE PRINCIPLE AND OTHER DESIGN ELEMENTS DETRIMENTAL TO PROPER FUNCTIONING OF THE EQUIPMENT




be predicated upon the assumption that the *principal functions* of a recovery type water heating system are:

(a) To *supply* the user's requirements for hot water at the *required rate of flow* and in the *required hourly volume—when needed*—regardless of whether the hot water demand exists at peak level for a *single hour* or continues at peak level for *two, or more, consecutive hours.*

(b) To *maintain* the required *temperature* of the hot water supplied to the fixtures at a *uniformly stable level.*

(c) To *deliver* the hot water to the fixtures exclusively *from* the stored reserve in the hot water storage tank, based upon the understanding that the function of the hot water storage tank is to *maintain a stored reserve of hot water* which will enable the system to meet demands for hot water which may *exceed—in rate of flow per minute or in hourly volume* — the recovery capacity of the water heater, or heaters, employed in the system.

(14) Reference to *Figure No. 14* will reveal three, specific, responsible causes for failure of this typical recovery water heating system to fulfill the above described phases of its primary function. Listed below—but not, necessarily, in the order of their importance as potential handicaps to proper functioning of the system—these are:

(a) Assuming that the recovery circulation between the heater (A) and the hot water storage tank (B) would not, at any time, be interrupted or suspended—and which is not, necessarily, true (see (b), below)— the so-called recovery circulation would be confined to, or short-circuited in the *left* end of the hot water storage tank (A). The only means available for heating the water in the opposite, or *right* end of the tank (A) would be by direct conduction of heat through the water in the tank. And it is a well known and accepted fact that water is a very poor conductor of heat.

Further — and still assuming that the hot water supplied to the fixtures through the hot water discharge line to the fixtures (c), were to come *from* the hot water storage tank (A) —the displacement flow of cold water, entering the tank at (D) from the cold water supply line (E) and flowing from the *right* to the *left* end of the tank (A), would interfere with or prevent the transmission of heat to the water in the right end of the tank.

This factor, *alone* would effectually prevent the maintenance of a uniformly stable temperature in the hot water delivered at the fixtures as an abnormally high differential would inevitably exist between the temperatures of the water at opposite ends of the tank.

(b) Assuming, again, that the recovery circulation between the heater (A) and the hot water storage tank (B) would not, at any time, be interrupted or suspended, the hot water from the heater (A) would enter the storage tank at point (F) from the hot, discharge, recovery circulating line (G) and (G-1).

Due to the fact, however, that the hot, discharge, recovery circulation must travel upward through line (G) to a point *above the level* of the top of the hot water storage tank (represented by the broken line (H) before entering the tank through that section, (G-1), of the hot, discharge, recovery circulating line (G), a *vapor lock* can, and frequently does

occur in the horizontal section of the circulating line above the level of the broken line (H).

The possibility of such vapor lock occurring will be greatly increased if the recovery circulating lines between the water heater and hot water storage tank through which the recovery circulation must flow, are too small or contain an excessive number of fittings, particularly ninety degree elbows. The increased frictional resistance to the flow of water resulting from the use of too small piping or too many fittings will materially *retard* the flow of water and *increase* the length of time that the water remains in the heater. The longer the water remains in the heater, the *hotter* it will become—and the *hotter* the temperature of the water leaving the heater, the *greater* will be the possibility of vapor lock occurring.

When such a vapor lock occurs, the circulatory flow is interrupted or suspended and hot water from the heater (A) is prevented from entering the storage tank (B). Should this vapor lock occur in a *manually controlled* recovery water heating system during a long stand-by period, the water retained in the jacket or tank of the heater would rapidly attain a dangerously high temperature with resulting serious damage to property or personal injury if the water heater were not equipped with a suitable relief valve or other safety device.

Should this vapor lock occur in a *thermostatically* controlled recovery system in which the water heater is equipped with a *limit control*, this control would function to shut-off the supply of gas or other fuel until circulation is resumed. In either event, the recovery of hot water by the heater would be suspended for such time as the vapor lock continued to exist and the system would be incapable of supplying the full potential capacity or volume of hot water.

*Note:* The possibility of vapor lock, such as described above, would be materially reduced, if not eliminated, if the recovery circulation between the water heater and hot water storage tank were to be accelerated by means of a circulating pump.

(c) Assuming, next that—if it is the function of the hot water storage tank to *maintain* a stored reserve of hot water which will enable the system to meet hot water demands that may *exceed* the recovery capacity of the water heater (either in gallons per minute rate of flow or in hourly volume as outlined in (13) — (c), above) and the hot water *is* delivered *to* the fixtures *from* the stored reserve of hot water in the hot water storage tank—it will then be glaringly apparent that another operating condition will exist which will definitely *prevent* the system from delivering the full, potential capacity of hot water or from maintaining a uniformly stable hot water temperature.

If, then, the hot water delivered to the fixtures is supplied *from* the hot water storage tank, either of two adverse conditions will be created:

*FIRST*—During such times as hot water is being drawn at the fixtures and hot water *from* the hot water storage tank is flowing upward through that section of the piping, identified on the diagram in figure No. 14 as (G-1), it is obvious that it will be manifestly *impossible* for hot water *from* the heater to flow *to* the hot water storage tank through the pipe section (B-1) as this would, in effect, necessitate water flowing *simultaneously in opposite directions* through the *same section of pipe*, (G-1).

The recovery flow of heated water *from* the heater to the hot water storage tank will, consequently, be interrupted or suspended during all periods of time when hot water is being drawn at one or more fixtures. Where this condition exists and the recovery flow is periodically interrupted or suspended, the water retained in the jacket or tank of a heater in a manually controlled recovery system will rapidly attain an abnormally high temperature during such periods and—if not wasted as a result of the absence of a relief valve on the heater or if the period during which the recovery flow is suspended is short and does not result in opening of the relief valve—will be delivered at this excessively high temperature to the hot water storage tank where it will stratify with a resulting increase in the differential between the temperature of the hot water at the *top* and that at the *bottom* of the tank. Where the system is thermostatically controlled and the heater is equipped with a high limit control, this control would function to shut-off the supply of gas or other fuel upon attainment of abnormally high temperatures in the heater resulting from suspension of the recovery flow and too long retention of the water in the heater.

In either event such interruption or suspension of recovery flow or circulation will result in an inescapable sacrifice of potential hot water recovery capacity. The percentage of recovery capacity which will be sacrificed during any given hour will be directly proportional to the aggregate length of time during which the recovery flow or circulation is suspended or interrupted while hot water is being drawn at one or more fixtures.

*Or, SECONDLY,* the hot water delivered *to* the fixtures will *not* be supplied *from* the stored reserve of hot water in the hot water storage tank, but *will* be delivered direct to the fixtures from the jacket or tank of the water heater (A), flowing through the hot, discharge, recovery circulating line (G) to the point where this line connects to the hot water supply line to the fixtures (C) and then through line (c) to the fixtures or point of use. The hot water delivered from the heater in this manner will be replaced by cool or cold water from the bottom or lower zone of the hot water storage tank (B). The cool or cold water, leaving the tank at point (L), will flow *to* the heater through the return recovery circulating line (K) and will be replaced in the tank by cold water entering the tank at point (D) through the cold water supply line (E). The cold water entering the tank at point (D) will flow directly to point (L) along the bottom of the tank without, in any way, disturbing the temperature of the hot water which will remain stratified in a practically static condition in the top or upper zone of the tank (B).

This, second, operating condition will be found to occur with much greater frequency than will the first condition described above. In fact, it may be stated that it is this, second, condition which will *invariably* be found to exist wherever the piping lay-out of the water lines interconnecting the water heater and hot water storage tank conforms to that illustrated in Figure 14. The existence of this second condition is unquestionably the principal, responsible cause for wide fluctuation in the temperature—even within short periods of time—of the hot water delivered to the fixtures from a recovery water heating system piped in this manner.

(15) To more readily visualize the fact that the temperature of the hot water supplied by a recovery water heating system, installed as illustrated in Figure 14, will inevitably fluctuate widely, it would, perhaps, be advisable to examine *what actually occurs* where hot water is drawn at the fixtures. The system in question consists of a 300 gallon hot water storage tank (B) and a

water heater (A) containing 6 gallons of water in the jacket or heater tank and having a recovery capacity of 5 gallons per minute or 300 gallons per hour of hot water at the required temperature of 120 degrees F. The cold water supply temperature is 60 degrees F.

After a stand-by period of only 10 minutes—in which the water in the jacket or tank of the heater has attained a temperature of 205 degrees F., as a result of excessive frictional resistance in the recovery circulating lines, (K) and (G), causing the water to be retained in the heater for an unnecessarily long period—the hot water faucets at 3 sinks are opened simultaneously. The rate of flow from *each* faucet is 4 gallons per minute resulting in the hot water being drawn from the system at a rate of flow of 12 gallons per minute.

Since the hot water supplied to the sink faucets *directly from* the jacket or tank of the water heater will be delivered at a rate of flow of 12 gallons per minute, it is self evident that the 6 gallons of 205 degree F. temperature water will be drawn from the heater in 30 seconds during which the hot water delivered at the faucets would be at, or near, a temperature of 205 degrees F. — a dangerously high temperature.

It is this almost instantaneous displacement of hot water—at or above a temperature of 200 degrees F. in the jacket or tank of the water heater —by cool or cold water—possibly at a temperature as low as 60 degrees F. — that is principally responsible for cracks occurring in the jacket or shell of heaters made from cast iron and in which the jacket extends to the bottom of, or surrounds the combustion chamber. This is particularly true of coal, hand-fired water heaters. It is the resulting, rapid contraction of the metal under such conditions that causes such cracks which will be observed to occur, in almost every instance, close to the point where the return, recovery circulating line (K) is connected to the base of the heater.

Next, should the draw of water at the 4 sinks continue at the rate of 12 gallons per minute for as *short* a period as 2 minutes, it is also self evident that the temperature of the water delivered in the last one and one-half minutes would *drop* to approximately 85 degrees F., as the heater, operating at full capacity, would be able to raise the water temperature only 25 degrees F., if the water were drawn at the rate of 12 gallons per minute. Here, again, we face the inescapable fact that employment of the typical recovery water heating system which incorporates the *"two Way Pipe"* principle in the piping lay-out can, and will, be responsible for a fluctuation of as much as 120 degrees F., in the temperature of the water delivered to the fixtures and that this wide fluctuation in temperature *can* occur within as short a time interval as one minute.

Another questionable practice occasionally employed when installing the typical recovery water heating system illustrated in Fig. 14, and which is not shown on the diagram, is to connect the cold water supply line (E) to the return, recovery circulating line (K), instead of direct to the storage tank (B). This will serve only to establish a more favorable basis for promoting the flow of hot water to the fixtures direct from the heater rather than from the hot water storage tank.

Should any doubt remain that this typical recovery water heating system lay-out, illustrated in Figure 14, contains several design elements which definitely prevent the fulfillment of the three primary functions of such a system, it is suggested that those who profess to believe in the correctness of this lay-out select at random a recovery water heating system piped in this manner and check the operation under the conditions outlined above, and which certainly are not exceptional. The results will be enlightening. It is suggested, however, that if the hot water is drawn simultaneously from 3 shower heads, you do not stand under one of the showers — at least during the first half minute that the water is being drawn. Too many persons have been seriously scalded under similar conditions.

Let's quit kidding ourselves with the idea that the set of conditions outlined above may not occur frequently and recognize the fact that it *can* and *will* happen and that the design elements which are responsible for inferior performance should be abandoned.

It is recognized that those who advocate this method of installing a recovery water heating system do so on the theory that *some* hot water will be available quickly, or before the water in the hot water storage tank has attained the desired temperature. This, of course, is true to a very limited extent but the reasoning is inconclusive. Hot water *will* be quickly available, but *only that volume* or quantity which is contained in the jacket or tank of the water heater. To agree with this theory is to recognize the fact that hot water drawn at the fixtures does, in fact, come *from* the heater and *not from* the hot water storage tank of the system and that—if the *draw* of hot water *exceeds* the quantity contained in the heater jacket and/or the rate of recovery in gallons per minute — the temperature of the water delivered at the fixtures will *drop abruptly* after the small volume of hot water in the heater is quickly exhausted. To accept that theory as a valid reason for the continued use of this method also evidences a willingness to swap the dubious advantage of a quick shot or squirt of hot water—which will be limited in volume to that contained in the heater jacket—for the definite advantage to be gained by making the potential capacity of the system available at a uniformly stable temperature. Why employ a hot water storage tank if it is to be by-passed by the water supplied *to* and delivered *from* a recovery type water heating system at *any* time?

And now — having figuratively taken apart the typical recovery water heating system illustrated in Figure 14—let us make the necessary and obvious alterations in the layout which will eliminate the conditions responsible for failure to fulfill the three, principal functions of such a system as enumerated in (13) —(a), (b) and (c), above.

This phase of the subject will be covered in Part 4 of *Chapter VIII* to follow.

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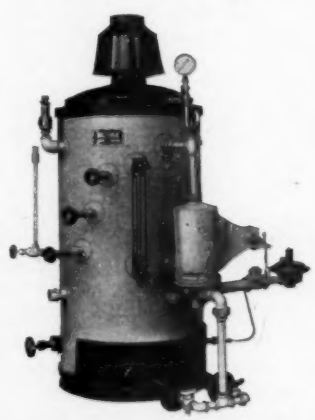

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# Sales Training Guide Manuals

By
**Fred A. Herr**

IN ORDER to facilitate the instrumentation of the Pacific Coast Gas Association's 14-unit sales training program, the association's committee on sales training, headed by R. C. Terradell of the Southern California Gas Co., Los Angeles, has prepared two special guide manuals and is now making them available to gas utilities, appliance dealers and dealer organizations in the western states.

One is a "Group Leader Guide." One such guide has been compiled for application to each of the 14 units of training constituting the PCGA program so that indoctrination of appliance dealers, salesmen, merchant plumbers and distributors in modern methods and effective sales techniques for merchandising gas-fueled appliances can be started and carried on with a minimum of preparation.

The second is a master manual entitled "Organization and Administration Guide." This sets forth for utility company sales-training executives the steps that can be taken to carry out virtually any type of training program, whether it be for the sales personnel of appliance dealers, merchant plumbers, distributors or gas utilities.

### Original Training Plan Amplified

The present 14-unit program of the PCGA is the outgrowth of pioneering efforts made in 1940 by the Domestic Sales Committee under the chairmanship of O. R. Doerr of the Pacific Gas & Electric Co., San Francisco. The course was prepared under the George Dean Act by F. M. Wakeley, staff instructor, California Department of Education, with members of the PCGA collaborating and supplying required factual information and selling technique. This project was completed in 1941 and published in 1942 as 14 units of instruction, each in a separate booklet dealing with a separate subject. These are:

Unit
1. Gas Information Manual for Salesmen
2. The Science of the Art of Successful Selling
3. What Makes People Buy Gas Appliances?
4. The Salesman and the Sale
5. When the Customers Call.
6. Prospecting Inside the Store.
7. Getting Business Outside the Store.
8. Development and Use of a Prospect File.
9. Preparing to Make an Effective Sales Presentation.
10. Making an Effective Gas Range Presentation.
11. Making an Effective Automatic Gas Water Heater Presentation.
12. Making an Effective Gas Refrigerator Presentation.
13. Making an Effective Presentation of Gas Heating.
14. Types and Traits of Prospects.

### New Group Leader Guide

As an amplification of this earlier work, the PCGA has completed the Group Leader Guide plan in order to simplify the initiation of the training program. This work, as well as the preparation of the Organization and Administration Guide, which will be described more fully below, was carried out by the Terradell committee composed of C. A. Miller of Gas Appliances, Inc., Los Angeles; F. S. Parmenter, Southern Counties Gas Co., Los Angeles; A. P. Stryker, Pacific Gas & Electric Co., San Francisco; and D. L. Turner, San Diego Gas & Electric Co., San Diego. The Terradell committee functioned under the overall supervision of H. A. Lee, PG&E, San Francisco, the 1947 general chairman of the association's Sales and Advertising Section.

Each of the 14 group leader guides contains a list of visual aids and properties required for the presentation of a paticular unit course of training. Prefacing the complete set of guides is a foreword in which information is presented pertaining to preparation of conferences, selection of meeting places, an outline of basic instuction methods, how the type and amount of discussion on each question should be determined, how interest in the class can be obtained, and similar data.

Following the introductory data, each group leader guide presents suggestions concerning how the class work can most suitably and effectively be presented. The style is informal. It offers for each unit instructor a plan for presenting the instruction and, in general for conducting the course. Included are tips on how and what to include in assigned reading and how to prepare subjects for discussion. When the subject matter indicates the need for pictorial elaboration, the textual instruction in some group leader guides is amplified with graphs, sketches or photographs, sometimes both.

R. C. Terradell, Supervisor of Sales Training, Southern California Gas Co. and 1947 chairman, Sales Training Committee of Pacific Coast Gas Assn.

### Terradell Explains Master Guide

In a report on the PCGA 1947 sales training program, Chairman Terradell pointed out that the committee had decided that an "Organization and Administration Guide" would be invaluable in assisting gas appliance dealers, merchant plumbers, distributors and utilities to organize their own training programs. This master guide was prepared during the past year (1947) and outlines the means of planning and administering the program under specific local conditions.

The Organization and Administration Guide, for instance, provides a definite working plan for conducting the training project in instances where the gas utilities may be called on to conduct training for gas appliance dealers, plumber-dealers or distributors. Another phase of the program, Terradell reported, outlines a step-by-step procedure for official organizations of those firms which

merchandise appliances and wish to train the sales personnel themselves, among their own staffs.

Recognition is also given, Mr. Terradell reported, to the possibility that some appliance dealers and utilities may not have the facilities for conducting a training program nor the instructors to release for that type of activity.

### Guide Outlines Training Steps

To provide training under such conditions, the guide outlines every step which can be taken to make the course part of the State's Adult Education Program, wherein it is jointly financed by the State Board of Education (with separate definition of regulations applying in various western states) and the Federal Government under the provisions of the Congressional George-Dean Act of 1937.

Such aid is available, according to Terradell, since the PCGA'S sales training program qualifies as an adult education project under this act and, consequently, any utility or gas appliance dealer desiring this help can obtain the necessary administrative and financial support.

"Various states," he reported, "have assisted private business in planning for expansion, reorganization, sales training and advertising. The California Department of Education, for instance, works through the Business Planning Institute to render this service."

The major purpose of the Institute, according to Terradell, is to help businessmen to cooperate and serve the public efficiently. An endeavor is made through the Institute to bring to business groups qualified specialists to present information upon the various topics included in the course.

Where an entire business district is contemplating community planning, the PCGA'S sales training program can be incorporated as part of the general program, if sufficient attendance can be assured to warrant holding the classes. It then, Terradell explained, becomes part of the adult education program, jointly subsidized by the Federal government and the interested State Board of Education.

### New Plan Speeds Original Program

The association's 14-unit course of training is ready now, Terradell reported. He pointed out, however, that during 1947 dealer sales organizations have not been ready to use it because appliances were in short supply and selling has consisted chiefly of saying "no" in various ways to impatient customers.

Terradell added, however, that the need for facilitating the initiation of training programs is indicated by the fact that the slow and steady increase in the flow of durable goods is resulting in businessmen returning to their former methods of aggressive merchandising.

Terradell emphasized that the problem in 1947 was *how to get things to sell*, not *how to sell them*. This, he declared, accounted for the lack of use by appliance dealers of the training program which the PCGA has available for them on request.

### Tells How Program Can Be Set Up

The recently completed Organization and Administration Guide provides copiously complete information concerning how training programs of different types can be set up. The data are designed for gas appliance dealers and salesmen, merchant plumbers and distributors, as well as for utility company personnel.

The introduction explains that in considering the conduct of a sales training program it is essential to analyse the local conditions which prevail so that a plan can be adopted which is most appropriate and effective in the area involved.

It is explained, further, that, in some instances, the gas utilities themselves may be called upon to conduct the sales training program for appliance dealers, salesmen, distributors and plumbers. (The term distributor as used here implies any organization which merchandises gas appliances.)

The compilers of the guide have also taken cognizance of the fact that there may be occasions when the dealer himself would prefer to train his own employees, or that the official organizations of those firms which merchandise gas appliances may desire to administer their own sales training program with material contained in the 14 units of the Pacific Coast Gas Association's program. The guide likewise covers cases in which some outside assistance may be desired when neither the gas utilities nor the gas appliance dealers feel that they have sufficient manpower or adequate facilities to carry on a sales training program.

An effort has been made to discuss each of the conditions cited above in terms of possible ways of organizing and completing an adequate training program.

### Suggested Plan for Utilities

For gas utilities that propose to conduct the training program for their gas appliance dealers the guide cites a number of arrangements that should be made before entering into a sales training program. Six basic suggestions are given, as follows:

**1... Obtain through a survey the number of gas appliance dealers and salesmen who intend to participate, noting their geographical location.**

**2... Determine number of sales personnel and participating dealers who will receive the training.**

**3... Determine which units of the PCGA course will be administered to the respective groups of sales personnel.**

**4... Obtain a supply of PCGA sales training units sufficient to supply each enrollee with a copy. It is suggested that at least twice the number of courses be obtained than the maximum anticipated attendance.**

**5... Plan the meeting from the standpoint of a minimum of 10 to a maximum of 20 persons.**

**6... Select suitable meeting places so located that they can be easily reached by employees of several business organizations, either in dealer establishments, gas company offices, association or fraternal halls rented for the occasion, or in local schools.**

### Tips on Meetings and Classes

The guide cautions about obtaining rooms large enough to accommodate the maximum anticipated attendance; that such rooms be properly ventilated and lighted; that they be equipped with facilities for darkening them sufficiently for satisfactory stereopticon and film projection; that supplies of gas and electricity be available. Desirable equipment is listed as including a blackboard, stereopticon screen, sound motion picture projector, slide projection equipment, and gas appliances which are to be demonstrated or used in the training course.

The Guide suggests that required supplies of study questions be mimeographed, allowing for sufficient extra copies for spoilage. It is also recommended that instructors be chosen, wherever possible, from the group of sales department employees who regularly contact the dealers in the area under consideration.

The guide suggests that meeting schedules be arranged through the dealers and be so planned as to meeting their operating convenience and yet provide sufficient attendance to warrant holding the classes. Thus, the guide states, meetings may be scheduled

(a) before the start of a regular business day.
(b) at the close of the regular business day.
(c) In the evenings.

Refresher meetings to be held not later than six months following completion of the course also are recommended.

### Plan for Dealer Organizations

In a suggested plan for dealer organizations, the guide points out that aggressive gas appliance dealer organizations may prefer to carry this training program to their own members. Main points in the proposed plan of this type are cited in the guide as follows:

That the officers of the dealer organization appoint a sales training committee consisting of

1. A chairman to coordinate each separate activity in which the committee will be engaged and plan and carry on the promotional effort necessary to "sell" the program.
2. That a member be appointed to obtain the names of dealers who will participate in the program and ascertain the expected attendance in their respective sales forces. This member would be charged with the responsibility of ascertaining which portions of the course are desirable for the sales personnel of the individual dealers. He would also be expected to stimulate interest in the program. One suggested method is the mailing of a questionnaire to each potential participant, timed to follow the first official announcement of the training project.

### Fabricating Visual Aids

Suggestions are also set forth in this plan for assigning responsibility to a certain member for fabricating the visual aids and properties needed to administer the program and for soliciting the services of a qualified instructor and locating and reserving satisfactory meeting places. The guide emphasizes that intensive promotional effort is mandatory to officially stimulate membership interest in participation, and that an announcement of the program, either written, verbal or both, is not sufficient. As means for disseminating news about the need for such a program and what it will offer the guide suggests the official journals of organizations of dealers, local newspapers, direct mail to each member, in which the project would be explained.

### Plan for Utility Staff Training

A third plan contained in the guide presents an outline of procedure for training utility employees. It is pointed out that for general administration purposes the total *number of employees* in each firm has no effect upon the training project, but that the *geographical organization* of the utility exerts an influence on such matters as meeting location, attendance and frequency of sessions.

Work classifications which can profitably be given training are cited as sales department personnel, counter clerks and other customer contact employees. Information pertaining to minimum number of enrollees per class, selection of meeting places, appointment of instructors etc., in the main, is similar to that provided for the plan for dealer organizations (see above).

It is suggested that the schedules of meetings be planned to meet company operating convenience and still provide sufficient attendance. Refresher courses after six months are also suggested in this plan.

### Minimum Training Recommendations

The Organization and Administration Guide points out that each of the 14 units in the PCGA training course covers an important phase of gas appliance sales work and that, grouped together, they represent a well-rounded treatment of fundamentals, the knowledge and use of which are essential to successful selling. For this reason


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CONSTRUCTION and MAINTENANCE TOOLS

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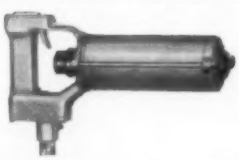
ELECTRIC HAMMERS

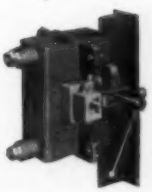


— for drilling, cutting, chipping concrete and masonry — scaling old paint and rust.

*"Gasoline Hammer"*
PAVING BREAKERS
100% Self Contained
Busting Concrete, Digging Clay, Shale, Hardpan, etc.
Tamping, Backfill
and a host of other jobs

*"Portable"*
ELECTRIC DRILLS
3/16" to 1" capacity

*External Concrete Form*
VIBRATORS
Setting and compacting concrete in thin wall forms, pipe forms, standards, etc.
The industrial models can be applied to bins, hoppers and chutes to keep material free-flowing.



Save You Money and Time
on hundreds of "nuisance" jobs.

*Write for illustrated literature*

SYNTRON CO.
920 Lexington Homer City, Pa.

the minimum training recommendations in the guide include the entire course, with the exception of those dealing with a specific appliance which may not be sold by a dealer.

It is also recommended that, since the attendance of meetings will generally be made up of employees of two or more dealer organizations, it is advisable to establish class attendance on the basis of common sales interests. Where this is not feasible, the guide recommends that the subject of each successive meeting be announced so that individuals can determine in advance whether the subject matter is applicable to their needs. The following recommendations for minimum training are given:

For Adult Education classes . . . . . entire course of 14 units.

For gas appliance dealers who do canvassing . . . . . units 10-11-12-13, and balance of course.

For gas appliance dealers who do no canvassing . . . . . Units 10-11-12-13 and 1-2-3-4-5-6-7-8-9 and 14.

For gas appliance distributors . . . . . entire course.

For gas appliance manufacturer representatives . . . entire course.

For utilities . . . . . entire course.

### General Information

The masterguide also contains a mass of general information dealing with such subjects as limited meeting recommendations and suggested agenda for conducting meetings, singly or in series. It explains how outside assistance that may be required can be obtained through financing by the State or Federal governments. Included is a directory of the names and addresses of coordinators and teachers of the State Department of Education in northern and Southern California, and other information dealing with towns outside of areas served by teacher-coordinators; procedure for organizing and administering the sales training program in the states of Arizona, Oregon, Utah and Washington; and data on state business planning institutes and similar organizations.

### New Film on Selling Appliances

Recognizing that the use of the PCGA training program by utilities, plumber-dealers, appliance organizations and other groups has been limited during the past year because of the shortage of appliances available for sale, the PCGA committee headed by Terradell decided to profitably take advantage of this hiatus in the appliance market by producing a sound film entitled "The Star Salesman." This film traces the steps in making an effective gas range presentation, and is now part of the association's program.

"The committee believes," Chairman Terradell declared, "that the sound slide film represented an ideal vehicle for summarizing both visually and audibly the subject matter covered during the classroom sessions devoted to selling gas appliances. It was also decided that group leader guides of the type now ready would insure uniformity of training procedure where several instructors were used over a protracted period of time, and the work of administering the training would be simplified."

---

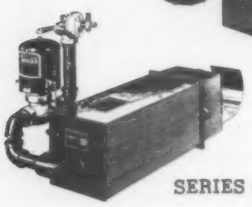
**Kitchen Cabinets.** A new, colorful, illustrated Youngstown Kitchen catalog is announced by Mullins Manufacturing Corporation, Warren, O. It contains full-color pictures of more than 18 suggested kitchen arrangements, as well as pictures of the Youngstown line.

Various features of Kitchenaider cabinet sinks, and base and wall cabinets also are well illustrated. Information on use of the Min-a-Kitchen and on kitchen planning for old and new homes is included.


*Eliminate*
**costly change-over work..**

SERIES 84

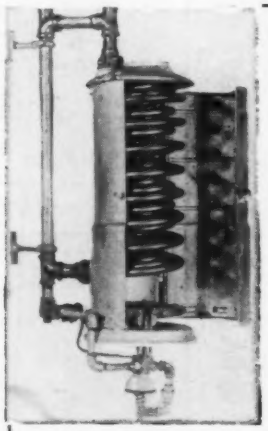
SERIES 302-20



SERIES 400

The Roberts-Gordon burner is readily adaptable to all types of gas with no major change of parts and without sacrificing efficiency. All that's necessary is to adjust the patented iris orifice for the proper input and the air shutter for the right amount of air. We estimate the saving to the utility to be at least $15 per customer . . . a mighty important reason for being glad you sell the Gordon.

**ROBERTS-GORDON APPLIANCE CORP.**
137 Arthur Street • Buffalo 7, N. Y.
*Pioneers of the gas conversion industry and makers of "84", "302-20", "400" and Nordenson conversion burners*



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**Gas Water Heaters**

The water heater that is in a class by itself—should give 30 years of continuous service.

**Thermostatic Instantaneous**

Patented
FOR BUTANE - PROPANE
Our 100% safety pilot is the simplest on the market. Easily understood by customers.
Needs no storage tank.
Also heats up to boiling.
No. 1 heater heats 60 g.p.h.
No. 2 heater heats 90 g.p.h.
No. 3 heater heats 180 g.p.h.
No. 3 battery heaters for larger quantities of water.
The ideal booster heater.
No. 1 heater weighs 50 lb. crated.

The "Hotomatic" is fool proof. It is placed high on the wall. It is built of long life material. It heats fresh water as you use it. The "Hotomatic" for small and large apartments, boarding houses, hotels, cafes, residences, bungalows, garages, warehouses, churches, barber shops, beauty parlors, tourist camps, gymnasiums, baptistries, schools, laundries, filling stations, clubs, washing machines. PRICES RIGHT. Heats more water per hour PER DOLLAR INVESTED than any OTHER HEATER.

*Approved by*
**The International Gas Association**
GAS COMBUSTION ENGINEERS

*Manufactured by:*
**Little Giant Water Heater Co.,**
907 7th St., Orange, Texas, U. S. A.
Write for folder and prices

# New Gas-Diesel Development Provides Fuel Economies

| FIG. 1— SPARK-IGNITED GAS ENGINE FUEL COST | LOAD 100% | 75% | 50% | 25% |
|---|---|---|---|---|
| Spark-Ignited Gas (a) BTU/BHP/HR | 9500 | 10100 | 12000 | 17800 |
| CU FT/MO x 1/1000 | 9980 | 7970 | 6310 | 4675 |
| CU FT at 18¢ x 1/1000 | 1750 | 1750 | 1750 | 1750 |
| Remainder x 1/1000 | 8230 | 6220 | 4560 | 2925 |
| Cost 1750 M at 18¢ | $315 | $315 | $315 | $315 |
| Cost Remainder at 12¢ | $988 | $747 | $547 | $351 |
| Total Cost/Mo. | $1303 | $1062 | $862 | $666 |
| Total Cost/Yr. | $15630 | $12740 | $10340 | $7990 |

| FIG. 2— DIESEL ENGINE FUEL COST | LOAD 100% | 75% | 50% | 25% |
|---|---|---|---|---|
| Diesel (b) | | | | |
| BTU/BHP/HR | 7400 | 7450 | 7950 | 9250 |
| Gal. Fuel Oil/Yr. | 652500 | 493500 | 351000 | 204200 |
| Cost/Yr. at 7¢ | $45670 | $34540 | $24570 | $14290 |

| FIG. 3— ORIGINAL GAS-DIESEL FUEL COST | LOAD 100% | 75% | 50% | 25% |
|---|---|---|---|---|
| Gas-Diesel - Original (c) | | | | |
| BTU/BHP/HR., Total | 7200 | 8600 | 12000 | 20500 |
| BTU/BHP/HR., Gas | 6840 | 8120 | 11280 | 19060 |
| Cu.Ft./Mo. x 1/1000 | 7190 | 6400 | 5930 | 5010 |
| Cu.Ft. at 18¢ x 1/1000 | 1750 | 1750 | 1750 | 1750 |
| Remainder x 1/1000 | 5440 | 4650 | 4180 | 3260 |
| Cost 1750 M at 18¢ | $315 | $315 | $315 | $315 |
| Cost Remainder at 12¢ | $653 | $558 | $502 | $391 |
| Cost Gas/Mo. | $968 | $873 | $817 | $706 |
| BTU/BHP/HR. Oil | 360 | 480 | 720 | 1440 |
| Gal.Oil/Mo. | 2650 | 2650 | 2650 | 2650 |
| Cost, Oil/Mo. at 7¢ | $185 | $185 | $185 | $185 |
| Total Cost, Gas & Oil/Mo. | $1153 | $1058 | $1002 | $891 |
| Total Cost, Gas & Oil/Yr. | $13850 | $12700 | $12024 | $10690 |

| FIG. 4— NEW GAS-DIESEL FUEL COST | LOAD 100% | 75% | 50% | 25% |
|---|---|---|---|---|
| Gas-Diesel - Present (d) | | | | |
| BTU/BHP/HR., Total | 6400 | 6750 | 7350 | 8950 |
| BTU/BHP/HR., Gas | 6080 | 6323 | 6710 | 7670 |
| Cu.Ft./Mo. x 1/1000 | 6400 | 4980 | 3530 | 2015 |
| Cu.Ft. at 18¢ x 1/1000 | 1750 | 1750 | 1750 | 1750 |
| Remainder x 1/1000 | 4650 | 3230 | 1780 | 265 |
| Cost 1750 M at 18¢ | $315 | $315 | $315 | $315 |
| Cost Remainder at 12¢ | $558 | $388 | $213 | $32 |
| Cost Gas/Mo. | $873 | $703 | $528 | $347 |
| BTU/BHP/HR., Oil | 320 | 427 | 640 | 1280 |
| Gal. Oil/Mo. | 2355 | 2355 | 2355 | 2355 |
| Cost Oil/Mo. at 7¢ | $165 | $165 | $165 | $165 |
| Total Cost, Gas & Oil/Mo. | $1038 | $868 | $693 | $512 |
| Total Cost, Gas & Oil/Yr. | $12456 | $10416 | $8326 | $6144 |

THE LATEST improvements achieved by The Cooper-Bessemer Corporation's engineering department in connection with its Gas-Diesel engine are reducing fuel costs by 10 per cent under former Gas-Diesel operation at full load and as much as 42 per cent at one-quarter load.

This marks the first time since the introduction of the modern Gas-Diesel that such economy has been possible at less than full load.

Fuel economy records for a 1440-horsepower supercharged Gas-Diesel in a municipal power plant at Cherokee, Oklahoma, have shown fuel consumption figures considerably lower still. This unit, which was the first of the new type to be delivered, is an 8-cylinder Type LS, and has been in continuous service since March of this year.

A complete set of tables showing fuel costs at various loads for a 1440-hp spark-ignited gas engine, supercharged oil Diesel, supercharged Gas-Diesel as originally operated, and the new improved supercharged Gas-Diesel are shown in Figures 1, 2, 3, and 4.

These tables are computed from Cooper-Bessemer's fuel consumption guarantees for the various types of engines, based on fuel costs at the Cherokee, Oklahoma, plant. Natural gas at that station costs 18 cents per 1000 cubic feet for the first 1,750,000 and 12 cents per 1000 for the remainder each month, while Diesel fuel oil is seven cents per gallon.

Ralph L. Boyer, vice president and chief engineer of Cooper-Bessemer, points out that ever since the development of the Gas-Diesel for modern use was announced, it has been a very economical power unit at full load. In fact, it was more efficient than any other type of prime mover, including the Diesel oil engine which is its closest competitor.

"During the extensive research, results attained have by far exceeded our expectations," Mr. Boyer said.

"We found," he continued, "that the reason the Gas-Diesel was uneconomical at light loads was due to the leanness of the mixture. The lighter load made it more difficult to burn the charge with a pilot injection of fuel oil and the result was that a good percentage of the gas at light load was allowed to go up the exhaust stack without being burned.

"We have succeeded in finding a way of reaching that gas and burning it, so we can now state definitely that our present Gas-Diesels will show a lower BTU consumption at any and all loads than that of the oil Diesel."

---

**Manufactured High B.t.u. Gas.** Bulletin A-200 issued by The Gas Machinery Company 16114 Waterloo Road, Cleveland 10, Ohio, describes with diagram and photos, The Twin Generator Oil Gas Process desgined and installed by the Company.

# 54th Annual Convention Pacific Coast Gas Association

ALL the attendance records for P.C.G.A. conventions were broken this year at Coronado Sept. 23-25, when Past President A. E. Holloway, Chairman of the Registration Committee, announced a total registered attendance of 795 persons. The previous record was 781 in Coronado in 1940, closely followed by 765 in Los Angeles in 1944 and 729 in San Francisco in 1946.

The following officers and directors were elected:

*President*: A. H. Sutton, Mission Appliance Corporation.

*Vice President*: A. F. Bridge, Southern Counties Gas Company.

*Treasurer*: D. G. Martin, Pacific Gas and Electric Company.

*Directors*: R. R. Blackburn, Southern California Gas Company. Leroy M. Edwards, Pacific Lighting Corporation. C. H. Gueffroy, Portland Gas and Coke Company. N. Henry Gellert, Seattle Gas Company. Henry Honer, Western Stove Company. L. M. Klauber, San Diego Gas and Electric Company. E. G. Lawson, Pacific Public Service Company. J. S. Moulton, Pacific Gas and Electric Company. R. T. Richards, Central Arizona Light and Power Company.

F. C. Packer, Chairman of the Awards Committee, reported the following awards:

*Committee Award with Gold Medal to the Chairman,* To the committee which prepared the motion picture "The Miracle Flame"—R. R. Gros, Pacific Gas and Electric Co., Chairman; W. M. Jacobs, Southern California Gas Company; F. M. Kimball, Portland Gas and Coke Company.

*Gold Medal,* K. L. Boosey, Pacific Gas and Electric Company, for his 1946 paper outlining a procedure, since proved successful, for minimizing shut-off notices to delinquent customers.

Clifford Johnstone
Managing Director

*Basford Trophy,* To the Technical Section, K. B. Anderson, Coast Counties Gas and Electric Company, Chairman.

In addition to these specific awards, the Committee commented on the activity of two groups whose work is not covered by the rules governing awards. The first of these was the Sales Training Committee, R. C. Terradeli, Chairman. Mr. Terradell has done a splendid job in completing leaders guides and in an Organization and Administration Manual for the course, the text of which received a Committee Award in 1941. *(See page 47—Ed.)*

The second activity commended by the Awards Committee was the valuable work done by the Special Committee on California Safety Orders. This Committee was organized by A. W. Turner, Southern California Gas Company, some two years ago when he was sponsor of the Accident Prevention Group, Technical Section. E. C. Hunt, Pacific Gas and Electric Company, was its first chairman.

Get the FACTS
GAS HOLDER Inspection REPORT
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THIS REPORT ...may mean much to you.
Our Standard Inspection Report tells the actual condition—inside and out—of each gas holder examined. It gives you the hidden facts on where serious corrosion trouble may be brewing in your holders. It points out misalignments — their cause and best corrective measures. In short—it will save you money on your gas holder investment. Let us give you the facts.
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SINCE 1851
CINCINNATI 16, OHIO
GAS HOLDERS • HI-PRESSURE TANKS • PURIFIER BOXES
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An Independent Organization Not Affiliated With Any Other Builders of Gas Holders

# Federal Power Commission

### Transcontinental Gas Pipe Company, Inc.

The Trans-Continental Gas Pipe Line Company, Inc., Longview, Texas, has filed an amended application to replace its previous application requesting authorization to construct a gas pipeline system extending from Texas gas fields to the Eastern Seaboard. Total estimated cost of the project has been increased from $130,000,000 to $150,000,000.

Facilities proposed in the amended application include construction of a 26-inch transmission line beginning at the Rogers Lacy Field near Mercedes, Texas, and extending to a New York City delivery terminus, a distance of approximately 1839 miles; construction of 18 compressor stations with an aggregate installed capacity of 186,000 horsepower; lateral lines to serve the Philadelphia and New Jersey areas, a number of gathering lines in the Texas gas fields and other miscellaneous construction. Main line capacity would approximate 325,000,000 cubic feet of gas daily.

The company proposes to supply natural gas to major gas companies now supplying consumer markets in the Eastern Seaboard area of New York, Pennsylvania and New Jersey. Principal companies to be served, the application stated, include Consolidated Edison Company of New York, Inc., Brooklyn Union Gas Company, Public Service Electric and Gas Company (New Jersey) and the Philadelphia Electric Company. In addition various other such companies in the area are proposed to be served. The gas would be used principally to supplement manufactured gas now being served.

### Commonwealth Natural Gas Co.

Commonwealth Natural Gas Corporation, a new company, proposes to construct a 537-mile pipe line from Tennessee Gas Transmission Company's trunkline at West Bend, Kentucky, to Norfolk, Virginia, in an application filed with the Federal Power Commission.

Requirements for natural gas up to 100,000,000 cubic feet for public utilities, municipalities, and industrial customers along the route would be purchased from Tennessee Gas.

Commonwealth Natural was formed for the purpose of building the Norfolk line, the application states. Its officers and directors are: Michael E. Shea, president; James O. Watts, Jr., vice president; James R. Caskie, secretary; and Robert C. Watts, Jr., and Henry Sears, directors. All officers are directors.

Contracts presently are being negotiated by Commonwealth Natural with Roanoke Gas Company, The Petersburg and Hopewell Gas Company, Virginia Electric and Power Company, Suffolk Gas Company, the City of Richmond, Portsmouth Gas Company, and a number of large industrial customers.

### Texas Eastern Transmission Co.

The Federal Power Commission has authorized Texas Eastern Transmission Corporation, Houston, Texas, to acquire and operate the Big and Little Big Inch lines to transport natural gas from the Southwest to gas companies operating in the Midwestern, Appalachian and Philadelphia areas, and to construct facilities to increase the delivery capacity of the lines to approximately 435 million cubic feet of gas per day.

Companies in the Appalachian area receiving gas supplies under contracts calling for an aggregate of 340 million cubic feet per day are The Ohio Fuel Gas Company, The Manufacturers Light and Heat Company, The East Ohio Gas Company, The Peoples Natural Gas Company, New York State Natural Gas Corporation, Equitable Gas Company, United Natural Gas Company and Carnegie Natural Gas Company. Until line capacity is sufficient to supply the primary contract volumes of 340 MCF, gas deliveries to these companies are to be apportioned in ratio to the contract amounts.

The Commission also authorized Texas Eastern to commence deliveries of gas to the Philadelphia area July 1, 1948. Deliveries will be made to The Philadelphia Gas Works Company and Philadelphia Electric Company under contracts calling for an aggregate delivery of 70,000,000 cubic feet per day until October 1, 1949 and 80,000,000 cubic feet a day thereafter.

### Tennessee Gas Transmission Co.

The Federal Power Commission has received from the Tennessee Gas Transmission Company an application for a certificate of public convenience and necessity to construct and operate facilities, necessary to increase the designed delivery capacity of its pipe line system by an additional 455,000,000 cubic feet per day and to extend such system to a point near Boston. Massachusetts. The application stated this addition would bring the total designed delivery capacity to approximately 1,055,000,000 cubic feet per day.

The estimated overall capital cost of the proposed facilities was approximately $150,000,000.

Tennessee stated it would use the requested facilities to meet the demands made upon it by its customer companies for natural gas and to make natural gas available in areas in eastern New York and New England now being served with manufactured gas.

The additional quantities of gas would be offered for sale under contracts identical with those now on file with the Commission under its effective rate schedules, except as to the demand and commodity charge, which, the application stated, will be adjusted to reflect the areas in which system deliveries are made. Portions of eastern New York State and New England within the area proposed to be served by the new facilities have a population of approximately 7,230,000 which includes approximately 1,634,000 customers for manufactured gas.

"Elno"
TRADE MARK REG.
RUST PREVENTER
For Automatic Water Heaters, Range Boilers, And All Types Of Hot Water Storage Tanks

"Elno" prevents rusty water in domestic and industrial water heating systems. It is a pure and simple rust preventer. It extends the life of galvanized storage tanks, especially where corrosive water conditions exist.

"Elno" is made to fit all makes of Automatic Water Heaters, Range Boilers, and Large Volume Hot Water Storage Tanks.

"Elno" is easy to install. Remove the hot water fitting and replace it with the "Elno" rod—that's all. "Elno" is equipped with a hot water fitting.

"Elno" enables you to sell Clean, Rust-free Hot Water Service. "Elno" gives you another talking point, an added selling feature.

There is an "Elno" made to fit the water heater you sell.

Write for prices.

*If you want to read the Story of Corrosion, its Causes and Prevention, write for Facts Bulletin, No. 102.*

The Cleveland Heater Co.
"Elno" Division
2310 Superior Avenue
Cleveland 14, Ohio

# Industry-Wide Cooperation

By
**Frank H. Adams,**
President
Surface Combustion Corporation
Toledo, Ohio

I AM GRATEFUL for the opportunity to present not just my opinions and suggestions on industry-wide cooperation, but also to try to reflect those expressed by other equipment manufacturers—companies whose managements are interested in attaining a closely-knit, effectively-coordinated, and actively-cooperative utility-dealer-manufacturer relationship.

In doing this I find myself in some measure apparently selling the future of the gas industry to the gas utilities. This seems a plain case of bringing coals to Newcastle, but I trust an analysis from different viewpoints may be helpful. And I am going to confine my remarks to the house heating and industrial fields, because here we have the greatest immediate problems. In the solution of these all manufacturers have a real interest.

The manufacturers and dealers generally realize the need of restrictions. But they are interested in knowing to what extent they are finally going to be removed. Are the gas utilities and pipe lines going to plan to meet the demand for gas service when material shortages are relieved? Is constructive effort being made to solve the marketing problems which have emerged and will continue to emerge from the paradoxical situation in which the industry finds itself today—assuming substantial expansion is to be made which requires protecting our market potentials?

In this program of expansion, the gas utilities' problem is twofold:

*First,* how much of this present enthusiastic acceptance is *permanent* load on which their plans for expansion can be soundly based? Every manufacturer has been faced with an immediate market far in excess of existing production capacity. The "$64 question" is, "What percentage of the rate of demand represents a rate which will endure long enough to justify large expansion of capital investment?"

You have heard it predicted that at present fuel price levels natural gas would expect to carry the nation's heating load. I think you will agree the problem is not that simple. I am sure that before that can happen, or anything approaching it, prices must reflect competitive values. Now they reflect a weird combination of political, economic, and regulatory viewpoints which do not form a very stable foundation for the investment of private capital required by any such expansion. So, if I attempt to analyze some of the fundamentals which, it seems to me, control such an expansion, it is because I feel that this expansion and the required investment must finally be based on such fundamental values.

*Second,* what can the utility do to hold a public acceptance which will justify and protect whatever expansion program it adopts? Involved in this question is not only public acceptance but manufacturer and distributor acceptance and loyalty, without which the gas industry cannot function effectively.

Just to assume that someone will always manufacture and sell gas appliances is not enough. You don't want this group to accept as a permanent viewpoint the one now being fostered—that the more industrial and house heating load it can take away from the gas industry, the better you would like it—that it forget gas heating for a year or two or three.

How much of this present enthusiastic acceptance of gas service can you depend on? I think any realistic appraisal of our past record, present problems and future potentials gives ample reason for confident planning and aggressive action.

Two years after V-J Day we find ourselves in the strongest economic and competitive position we have ever held in the history of our industry. Manufacturers have accepted gas as the most practical fuel for most heating and heat treating operations. The cooking load has reached an optimum; automatic laundries and dishwashers are placing a new emphasis on the necessity of automatic water heating. The demand for gas house heating has been unprecedented.

Goodwill has increased tremendously since prewar days, due to the remarkable service rendered by the utilities and gas burning equipment during the war years. Public confidence in the gas utilities generally is —or has been—at an all-time high. That confidence has rested on a sound foundation of service and technological developments fostered and assisted by sound industry policies in research and merchandising. These have stimulated every manufacturer in his own efforts and his desire to serve the industry.

### Industrial

In the industrial field, gas-fired furnaces have kept pace with metallurgical and production requirements. Probably the development of furnaces and processes using special atmospheres is the best illustration of this progress, because special furnace atmospheres have been one of the most important developments of the past decade. They are of interest because they are illustrative of a trend which increases the importance of firm, non-interruptible gas service in the industrial field.

In the first of these developments, gas carburizing in a continuous furnace replaced the process of carburizing by packing the parts being treated in a carbonaceous material. The refinement of this process now permits the use of a gas atmosphere so accurately controlled that it is used to restore the carbon in the decarburized skin of the metal parts without changing the carbon content directly beneath this skin. We find these gas atmospheres have made possible the dry cyaniding process by means of which a hard case can be formed, combining the advantages of carburizing and nitriding.

In the steel industry these gas atmospheres carry the complete responsibility for the bright annealing of sheets and coils. Charges up to one million pounds of mirror-bright steel in a single furnace give best evidence of the dependence placed on these machines and on gas service by the steel industry. The developments in the nitrogen atmosphere, using industrial gas as the medium for generating this nitrogen, have demonstrated such advantages in tin-coated strip that there is every evidence that it may have universal acceptance by food processors for their tin containers.

If these seem to be somewhat spectacular uses of gas, they should not make us overlook the reputation for accurate control and cleanliness in thousands of uses of gas service. It is this performance and reputation, gained over the past twenty years, and accelerated in the past five war years, that encourages manufacturers to suggest rate increases, if necessary, to give continuous gas service.

The point I want to make is this: It is just such developments which make it necessary to have non-interruptible gas service on which industry can depend so that its production lines will not be shut down. The willingness of the manufacturers to pay higher rates for this service is evidence not only of their evaluation of your service, but is indicative that they can and will, if necessary, go to fuels on which they may think they can depend—LP gases and electricity.

These developments and the production requirements of industry are such that the gas industry should definitely take out of the interruptible load classification much of its industrial load. This does not overlook the importance of interruptible and off-peak load integrated with the house heating load. But there have been developed many furnaces and processes in which changeovers cannot be made without difficulties. The competition is L-P gas and electricity. The gas industry should have no trouble in meeting that competition on a rate that permits non-interruptible service.

### Domestic Load

Equally important has been the trend toward gas service in the field of domestic house heating. The thing we may fail to realize is that automatic house-heating — whether with coal stokers, oil or gas-fired units— has become an accepted commodity in the home, where before the war it was a luxury. And in automatic house heating equipment, gas is or has been the preferred fuel.

It is important that this favorable position of house heating be realized in making your plans for expansion. The fact that you can still buy washboards for $2.50 is not a competitive factor in the sale of washing machines at $200 or $300. The price of coal ranges doesn't threaten the market for gas ranges, nor did W.P.A.'s best efforts to improve on Chic Sales' architectural designs decrease the American families' desire for more and fancier bathrooms.

This change is not just a trend to gas—it is a trend to greater comfort and convenience in the home, a cycle that has reached the heating system last. The public has accepted the idea of automatic heating. In a recent survey of houses built in the last year, 50 per cent used oil, 24 per cent gas, 5 per cent coal stokers, 6 per cent coal, balance unknown. That's 79 per cent automatic heating.

Incidentally, this preference for gas is one of the best examples I know of that I suppose might be termed as indirect selling. While you laid off all your own sales force during the war period, you actually had the finest sales force conceivable— all your customers who sat back in comfort boasting of their good judgment and foresight and watching their neighbors worry about oil rations, worry about coal delivery, prices, poor quality, and get mad at John L. Lewis. Now all of those neighbors are wanting and demanding the service that gas heat can provide.

That is the emotional side of the change. On the factual side is sound progress in insulated, better built, and smaller houses requiring from 15% to 50% less fuel to heat, lower-cost heating equipment, higher prices for competing fuels and lower cost for gas service. These values are too substantial for your public to overlook. It is upon this acceptance of automatic heating that we should confidently plan for the future.

Neither do I think we can question the magnitude of the new building programs ahead of us in the next five years. Present high costs and high prices may delay a great deal of it, and that works in your favor during the period of your own restrictions, but it is nonetheless an unquestioned reality over the next few years.

### Load Factor

The expansion of house heating means accepting a higher saturation of house heating and consequent lower load factors than have been considered in many cities. Industrial and commercial off-peak load should be developed as far as possible to balance house heating load, but a higher saturation of house heating means lower overall load factors and perhaps some higher rates for house heating and industrial markets. That challenge too should be accepted. If house heating gas service can be more easily sold now over competing fuels at prewar premiums than was possible then, the rate schedules should permit giving this service.

Is there any real argument about public acceptance in either domestic or industrial fields, or your competitive position? The answer is an unqualified "no." The real problem is the rate of expansion and how far the expansion can soundly be carried. Good progress is being made in peak load production equipment which should be helpful in controlling this load factor. You are familiar no doubt with the work being done at Chester, Pennsylvania, on the catalytic cracking of propane to produce an interchangeable gas for peak load standby. We have recently completed successfully the experiments in the cracking of gasoline which materially reduces the problem and expense of storage.

There are other important factors that might be briefly mentioned. While people expect to be served with gas, you are bothered by policies of regulatory commissions with respect to rates and earnings which seem inconsistent with expansion. Public opinion, backed by the same politicians who now criticize rate increases, will finally demand it. Industry needs gas. Your community needs expanding industry. You need industry to insure your investment.

Many of you know all angles of these problems better than I do. To those, however, who may be more pessimistic than I am as to the industry's ability to solve these problems, go back with me 25 years to the postwar period following World War I. By comparison we had practically nothing to be enthusiastic about. We had no position in the industry, little or no equipment to sell, and limited means of interpreting our service—gas house-heating was a special luxury.

The electrical industry had the industrial heating load, such as it was, by the tail and a downhill pull to the tune of "Do It Electrically"; and practically every industrial furnace manufacturer in the country was on the bandwagon—and laughing at a few gas men who didn't know the gas industry was dead.

### Present Position

By comparison today, we have everything to work with—public acceptance, equipment, technical knowledge, credit. Only two more things are needed — materials to relieve shortages and permit expansion, and confident salesmanship at all levels.

It is difficult to generalize because I know that many of the major utilities in manufactured and natural gas areas are preparing to meet the needs of this expanding market. It is to this group primarily that I wish to talk today, because within the scope of your operations during the next few years lies the immediate future

of the industry and the manufacturer and dealer market for equipment. The marketing conditions therein will be moulded largely by the merchandising policies which you pursue. What will occur in those sections where utilities are unable or unwilling to meet the needs of an expanding market is not within my province to predict. I leave the answer in the lap of the gods and to competition.

### Shortages and Restrictions

So, let's look briefly at some of the conditions which shortages and restrictions have and will continue to create in your territory and see what merchandising policies might be instituted to protect that market.

If our market surveys are correct, and I believe them to be reasonably accurate, then two-thirds (2/3) of the national market will, within the next three years, become a hotbed of competitive selling—not of fuel alone but of merchandise, of service, of appeals for a share of the consumer dollar. Plenty of gas will then be available; so will automobiles, electric appliances, oil and coal equipment, and the hundred and one things for better living that are already beginning to fill the pipelines of consumer supply.

*Therefore, preparing to serve a market is only one of the many problems of management. Today your problems are chiefly operating and financing. Tomorrow they will become marketing.*

### Goodwill and Confidence

What is happening to the goodwill the gas industry created or acquired during the war? It is improving—is it solvent? Frankly, our interpretation of the reports we receive show that it is definitely deteriorating in many areas. Company goodwill is not held by a public trying desperately to buy a product which a company won't sell. This applies not only to the particular product refused but to all its products.

As George Jones said in an editorial in the Servel News, "Although the switch of customers to other fuels cannot be immediately corrected, the serious part of it is that the search for other fuels may also apply to cooking, refrigeration and water heating. The fundamentals as to why our industry can best serve the domestic market may all be swept aside not only by competition, but by our failure to hold present customers and to seek new users for gas service."

A survey by Small Homes Guide in August says, "For a while gas was the most popular home fuel. Now it stands at 33% while oil is 45%." Goodwill is an intangible. It is the opinion of the mass mind—formed by impressions often lacking in clarity and devoid of facts. All that Joe Doaks comprehends is that he didn't lose any time during the war due to gas shortages. Mamma Doaks might have had to conserve a little but she had enough gas. But now the war is over and Joe lost time and money last winter because the plant in which he worked had to close down on account of gas shortages. And Mrs. Joe couldn't get rid of that dirty old coal furnace, and Joe, Jr., can't get automatic gas heat in that new G. I. house he bought. So, the Doakes and their bosses say "gas service is lousy." They are confused.

Multiply these impressions by the mass mind, which is not informed on the problems of gas supply; add the meddling and vacillation of politicians and commissions; subtract the domestic, commercial and industrial business your competitors are doing; and what happens to as fine a public acceptance as has ever been attained by our industry?

Public reaction runs all the way from considering that this is a planned shortage for the purpose of raising rates to a belief in the depletion of gas reserves. Walter Weir in a talk to the Baltimore Advertising Club said:

"Merchandise is one of the least important things a company has to sell. What he has constantly to sell, merchandise or no, — what he can never afford to stop selling—is the idea of his business, the concept of it, the reason why people can place confidence in it and whatever issues from it.

"For business is not a factory or production line or a distribution system. It is a relationship among people. And human relationships cannot be kept alive and thriving without the constant nourishment of ideas. Whether we regard them cynically as 14-year-olds or not, people are thinking creatures. And as businessmen we must realize we are dealing with people, not with just things we call markets or economic trends or purchasing power.

"Our overall job is not just to sell our product, but at the same time to build respect for the company and the system behind the product, because without that business success cannot be maintained. Business is not a factory or a production line or a distribution system. It is a relationship among people. And people must constantly be sold."

### A Program for the Industry

What can the gas utilities do during this period of restrictions that will help to maintain their public goodwill and protect their market potential? Let me suggest four things.

*First,* every individual gas company should present, in local advertising and news releases, the story of the reasons for its restrictions and the steps it is taking to remove them in the shortest possible time. The National Advertising Committee might well devote some of its national copy to this subject, but local action is particularly important because every existing and potential gas user is interested in learning what his own gas company is doing to serve him.

Other industries have had to meet this same problem. The success of A.T.&T's public relations policy is known not only to students of marketing but to the man on the street. Think of the dramatic story of service the gas industry could portray. Visualize the effect of a frank, factual portrayal of what this industry does to make 24-hour service available—the devotion of its men, materials, methods, and money to a cause in the public interest.

How many people have seen the news release of the Federal Power Commission that "16 existing and 5 proposed new natural gas companies have filed applications; and much of the construction which would increase capacity from 4400 million cubic feet to 8400 million cubic feet per day has been authorized. Of the latter, the delivery outside the states or origin would increase from 2000 to 64000 million cubic feet a day. Isn't it news to a public waiting for service that FPC has authorized in the year ended June 30, 1947, $273,000,000 of pipe line extensions alone, having a capacity of two billion cubic feet per day, affecting 80 large cities in 20 states?—This on top of $127,000,000 in the previous year?

It might also be news that furnace oil prices in New York are now between 10c and 11c as compared with 6c prewar, and the oil industry expects prices this winter between 12c and 13c; and that while coal has been doubling in price over the past 15 or 20 years, the cost of gas service has been cut in half.

Tell the people your problem — that it's a steel shortage, not a gas shortage. Tell the public, which includes your dealers and gas appliance manufacturers, what and when and how you are going to do something about it.

Do it NOW—not after these problems cease to exist. Do it NOW—while cooperative action can protect everybody's interest in the markets of tomorrow, and permit them to plan with you, not against you. It has always seemed to me that the ostrich that buried his head in the sand was giving an open invitation for a kick in the tail. You are investing money in plants, equipment, in pipe lines. It is just as essential to invest in a market as it is to invest in the facilities with which to serve that market—and in my opinion it's an industry-wide job, as well as the obligation of the individual companies.

*Second,* if you can't sell anything else, start on a campaign of upgrading existing equipment, to improve gas service through the replacement of obsolete, worn-out, and improperly designed gas heating systems. This applies to both the house heating and industrial fields.

The important thing is to start selling. Get your story over to the people in your market by personal contact and sales activity. You can't do the public relations job with only 30% of your prewar sales force. There is no better way to keep in touch with the users—to build public confidence—than through personal contact—the contact of your own representatives or by dealer organizations properly trained and interested in the future of the gas business. There is no better channel through which to approach your present users than a willingness and desire to improve their present comfort or operations through better heating application by replacing old, obsolete, antiquated equipment.

*Third,* hold the dealer cooperation you started to develop after the war by continuing your contact and interest in your dealer outlets. Nothing of permanent value can be gained by failing to cooperate with dealers who prefer to stay in the gas business. Just asking the dealer to forget about gas for a period of one to three years does not seem the right step to be taken if good public relations are considered necessary to the expansion and continuation of your business.

Due to the curtailment of gas service and the uncertainties which exist in the market, manufacturers for the first time are considering the necessity of becoming all-fuel appliance and equipment manufacturers—makers of commodity items — without preference or loyalty to any particular fuel.

One of the past objections to conversion burners was the instability of some part of this load due to the ease of reconversion to coal. Have you considered the effect of present restrictions in forcing the development and sale of gas designed equipment that can be operated also on oil or oil designed equipment operated also on gas? In the builders market there has always been some demand for central heating equipment on which the final selection of gas or oil could be left to the purchaser. Now in many areas this is the only type of equipment which can be sold.

The heating equipment dealer — the fellow whom you taught to sell automatic heating, the fellow many of you announced would do your postwar selling—is being forced to sell oil and coal equipment in order to stay in business. Many have their working capital tied up in inventory stocks of gas equipment which will take many months to move in present partial or completely curtailed markets.

To stay in business they have turned to the sale of competitive fuel equipment. Many of them like it. They are making a profit by staying in business as brokers of equipment, without loyalty to or preference for any type of fuel or make of heating equipment. These salesmen may continue as brokers unless price tips the balance in favor of gas, or you work out and put into operation now an effective program to keep these dealers interested in the business of selling gas heating service.

It is my prediction that unless such cooperation is given now, when an adequate supply of gas is available, the gas utilities will have to return to the merchandising of gas appliances, and particularly heating equipment, because it will take too long and prove too costly to try to recover lost ground and organize an effective sales force dependent on dealer cooperation.

*Fourth,* there is evidence of a serious need for a change in the emphasis placed by regulatory bodies on the importance of continuous rate reductions, and a more realistic appraisal of the problems of sound expansion to meet these demands for increased service.

It is certainly a paradoxical situation: the public is clamoring for gas service; the cost of house heating with natural gas is equal to or less than the cost of heating with coal; and the regulatory commissions are, at least in some cases I know of, unwilling to allow rates or fair principles of setting rates which either assure the allowable earnings they have established or give a sound basis for investment for further expansion. It is certainly an artificial situation which is an obvious hurdle to sound financing and expansion.

Competition has always been the answer to any unwillingness by utilities to extend service. But who is willing to run competing lines when the only hurdle is inequitable rates to existing companies? It seems a situation is developing in which these commissions themselves are denying extension of service to the public which they are supposed to assure.

It would be much simpler I know if we could ignore the need of additional capital investments for plant expansion and new pipe lines and the expenditure of energy that an expanding industry imposes. The status quo has its appeal. Here, however, is the real challenge to our initiative and our confidence in the gas industry and its future. The progress the gas industry has made and the present acceptance of gas service is a fair index of our opportunities and of the difficulty of our present problems. Certainly they are bigger than they were after World War I, but we have so much more accomplishment back of us, a so much firmer foundation of acceptance under us, that the decision to go ahead aggressively is not so difficult as many we made in the past.

### Maintain Public Relations

Summarizing what I have said—in an attempt to bring some of the trees in this forest into focus, we are going through a period of reverses and confusion in our long-term merchandising programs. Every industry, I presume, runs into its Battle of the Bulge. But the public is not going to understand your position in these reverses in this competitive battle or your intentions unless you tell them about it and show them you have some plans. You can't say, "Just forget us for two or three years." You have some allies whom you need in your present dilemma and future campaigns. It is easier to hold them than to attempt to replace them with others later.

Out of all this, however, stands one dominating fact that no one can discount, and especially you: the gas industry has never been in a better position than it is today to merit confidence within its own ranks and the faith of the public it serves. It takes the same courage and guts to carry that responsibility that it did to achieve it. Let's keep it working.

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*Revision of address presented at American Gas Association Twenty-ninth Annual Convention, Cleveland, Ohio, October 6, 7, 8, 1947.*

# Gas Appliance Manufacturers Assn.

MEETINGS of the several Divisions of the Gas Appliance Manufacturers Association were held at the Statler Hotel, Cleveland, during October 6-8.

At the Board of Directors meeting presided over by John A. Robertshaw, President, the resignation of F. J. Hoenigman was announced and Frank J. Nugent of Rheem Manufacturing Co. elected to the post of first Vice President and a nominating Committee appointed to choose a second vice president.

During 1947, new members totaled 157, making the total membership now 510.

A decision was reached to hold an exhibit at Atlantic City concurrent with the A.G.A. Convention in October 1948.

G.A.M.A. is proceeding on an enlarged statistical program and all divisional chairmen reported successful accomplishments.

A new Committee on L. P. Gas Legislation is being formed to keep members apprised on State legislation.

House Heating and Air Conditioning Division, C. B. Phillips Chairman—coordinating eastern utilities standards requirements for appliances to meet A.G.A. standards.

Industrial Gas Equipment Division, Herman Gehnrich, Chairman, functions as a coordinating group for codes.

Direct Heating Equipment Division—George McFadden, Chairman, is working on simplification of A.G.A. construction and performance requirements and on proposed L. P. gas regulations.

Water Heater Division, Frank Nugent, Chairman—acting on simplification of A.G.A. construction and performance requirements, to eliminate obsolete items and to reduce cost of testing fees. A proposed 1948 promotional program will be based on a mail ballot now under way. Plans and result of ballots will be revealed in the near future.

Range Division, Lloyd Ginn, Chairman, discussed steel shortage, prospects for broadened publicity and the removal of excise taxes on ranges. In the C. P. Group the "Gas Has Got It" campaign was discussed at length as well as adoption of C. P. requirements for L. P. gas and Butane-air gases.

UTILITY MEN ATTENDING A.G.A. CONVENTION

Upper, L. to R. Walter C. Beckjord, The Cincinnati Gas & Electric Co., Cincinnati, Ohio; George F. Mitchell, Peoples Gas Light & Coke Co., Chicago, Illinois.

Lower, L. to R. M. C. Alves, Union Electric of Missouri, St. Louis, Mo., B. D. Connor, Boston Consolidated Gas Co., Boston, Mass.

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# News of the Gas Industry

## Chairman, General Nominating Committee

A. V. S. Lindsley, Vice-President, The Connecticut Light & Power Company, Waterbury, Conn., was elected Chairman of the General Nominating Committee of the American Gas Association, at the Executive Session held in Cleveland, October 6, 1947. The Committee will recommend the nominations for the officers and directors to be elected at the 1948 Convention of the Association.

Other members elected to the Nominating Committee include: Joseph Bowes, President, Oklahoma Natural Gas Company, Tulsa 2, Okla.; William G. B. Euler, Vice-President and General Manager, Pacific Gas & Electric Company, San Francisco, Calif.; S. H. Hobson, President, George D. Roper Corporation, Rockford, Ill.; Dean H. Mitchell, President, Northern Indiana Public Service Company, Hammond, Ind., and N. T. Sellman, Vice-President, Westchester Lighting Company, Mt. Vernon, N. Y.

## A.G.A. Employee Relations Conference

The Employee Relations Conference sponsored by the Personnel Committee, Southwest Personnel Conference, and the Midwest Personnel Conference of the American Gas Association will be held at the Adolphus Hotel, Dallas, Texas, on November 19 and 20, 1947. Personnel executives from all of the nation's gas utility companies have been invited.

Willard G. Wiegel, Personnel Director, Lone Star Gas Company, will preside at the morning session on Monday. After an official welcome to Dallas by C. H. Zachry, President, Southern Union Gas Company, a discussion titled "Operating Under the Taft-Hartley Law" will be led by Benjamin Werne, Counsellor of Law and Lecturer at New York University Graduate School of Business Administration. He has written extensively on labor relations and collective bargaining and has conducted clinics on subjects growing out of labor relations. The latest developments under the new law, as they affect utilities will be reviewed by Mr. Werne.

At the afternoon session at which Fred H. Rauch, Vice-President and Director of Industrial Relations, Cincinnati Gas and Electric Company, will preside the subject will be "Finding Out What Your Workers Think" under the leadership of Joe Bevis, Vice-President, Opinion Research Corporation, Princeton, N. J.

William H. Lough, President of Trade-Ways, Incorporated, will lead a discussion on "Modern Employee Training Methods" with particular emphasis on audiovisual training aids and their uses for specific purposes.

Following a reception, John C. Elanagan, Vice-President, United Gas Corporation, Houston, Texas, will be the speaker at a banquet. His subject is: "Top Management and Employee Relations."

Vernon Myers, Assistant to the President, Sioux City Gas and Electric Company, will preside at the morning session on Tuesday. Fred R. Rauch, Vice-President, Cincinnati Gas & Electric Company, and C. E. Jurgensen, Personnel Director, Minneapolis Gas Light Company, will lead discussions on Whys and Results of Job Evaluation and Uses and Abuses of Employment Tests, respectively.

W. H. Senyard, Director of Personnel, Louisiana Power Company, will preside at the afternoon session where the discussion subject will be "Trends in Communication with Employees."

## Peoples Natural Gas Co. Appoints Yost Sales Mgr.

Charles L. Yost has been appointed sales manager of The Peoples Natural Gas Company, Pittsburgh, Pa.

Mr. Yost joined Peoples in 1938 as heating and ventilating engineer after 17 years as district sales manager for Kompak Water Heater Co., in the Tri-State area. He was made engineer in charge of the New Building division in 1941.

Charles L. Yost

A member of the Officers Reserve Corps since his service in World War I, Mr. Yost resumed active army duty in 1941 as a captain. Following a period with the Industrial division of the Army Ordnance department in Pittsburgh he went abroad for a tour of duty in France and Germany until 1945 when he returned to the Pittsburgh Army Ordnance department as a lieutenant colonel in the Officers Reserve Corps. He rejoined Peoples in 1946 as assistant sales manager.

Mr. Yost replaces Christy Payne, Jr., who has been made a vice president of the company.

## CONVENTION CALENDAR

**November**

10-14 *National Hotel Exposition,* Grand Central Palace, New York, A.G.A. Exhibit.
10-13 *American Petroleum Institute,* Stevens Hotel, Chicago.
13-14 *Mid-Southeastern Gas Association,* Raleigh, N. C.
19-21 *Wisconsin Utilities Association,* Joint Convention of Gas and Electric Sections, Commercial and Technical Divisions, Schroeder Hotel, Milwaukee, Wisconsin.
20-21 *New England Home Service Conference,* Boston, Mass.

**January**

22-24 *A.G.A. Home Service Workshop,* Congress Hotel, Chicago.

**February**

2-6 *Eighth International Heating and Ventilating Exposition,* Grand Central Palace, New York.

**March**

18-19 *New England Gas Association,* Annual Meeting, Boston.
24-26 *Southern Gas Association,* Galveston, Texas.
29-31 *Mid-West Regional Gas Sales Conference,* Edgewater Beach Hotel, Chicago.

**April**

5-7 *G.A.M.A. Annual Meeting,* Drake Hotel, Chicago.
7-9 *A.G.A. Sales Conference, Industrial & Commercial Gas Section,* Windsor, Canada.
8-10 *Mid-West Gas Association,* Annual Meeting (place not selected).
12-17 *National Restaurant Association Show,* Cleveland.
15-17 *Gas Meters Assn., Florida & Georgia,* Hollywood Beach Hotel, Hollywood, Sla.
19-21 *Motor Vehicle Conference, A.G.A.,* Hotel William Penn, Pittsburgh.
22-23 *Indiana Gas Association Convention,* French Lick Springs Hotel, French Link, Indiana.
28-30 *L.P.G.A. Annual Convention* and Trade Show, Kansas City, Mo.

**May**

4-5 *Natural Gas Department, A.G.A.,* Rice Hotel, Houston, Texas.
18-20 *Pennsylvania Gas Association, Annual Meeting,* Galen Hall, Wernersville, Pa.
24-25 *New York—New Jersey Regional Gas Sales Conference,* Westchester Country Club, Rye, N. Y.
24-26 *Production and Chemical Conference,* Berkeley - Carteret Hotel, Asbury Park, N. J.
27-28 *Natural Gas and Petroleum Association of Canada,* General Brock Hotel, Niagara Falls, Ontario.

## Kansas-Denver Pipeline Completed Will Serve 20,000 Additional House Heating Customers

Denver's second natural gas pipeline was officially placed in operation Wednesday, October 15, 1947, at 10:00 a.m. when Mayor J. Quigg Newton opened the huge valve which turned gas into the city distribution system of Public Service Company of Colorado. The new 20-inch line increases available supply more than 2½ times, from 83,000,000 cubic feet per day to 215,000,000 cubic feet per day when full capacity is attained.

Robert W. Hendee, President, Colorado Interstate Gas Company which built the new pipeline, J. E. Loiseau, President, Public Service Company of Colorado, assisted in the turn-on ceremonies which were attended by several hundred persons at the North Denver Town Border Station, 56th and Dahlia.

The pipeline construction was completed in 122 days of elapsed time and exactly on schedule as originally planned. Cost of the project is about $12,500,000. J. R. Horrigan was the general contractor on the pipeline; Ford, Bacon & Davis were consulting engineers; Stearns-Rogers Manufacturing Company were contractors on the compressor station. Youngstown Sheet & Tube Company supplied the pipe.

Natural gas was first brought to Denver in June, 1928, from the Amarillo, Texas, field through a 340-mile pipeline. This older line is 22 inches from the field to the Pueblo, Colorado, take-off and 20 inches from there to Denver. It supplies Denver and the pipeline of Colorado-Wyoming Gas Company, a subsidiary of Public Service Company of Colorado, which serves territory around Denver and north to and including Cheyenne, Wyoming.

Colorado-Wyoming Gas Company has planned a second pipeline from Denver to Cheyenne this year but delay in pipe delivery has held up the construction until next year. As a result restrictions are now in effect in the towns and area served by Colorado-Wyoming Gas Company.

It has been necessary for Public Service Company of Colorado to build many miles of city mains to provide for present house-heating and load growth generally. Approximately 20,000 new househeating customers will be added in Denver in 1947. This compares with a total of about 39,000 househeating customers in Denver for the entire period prior to 1947.

The completion of this second pipeline to Denver assures an ample supply of natural gas for many years for domestic and househeating requirements as well as for commercial and industrial needs of the city.

## United Gas Makes Flanagan G.M. of Texas Operations

Promotion of John C. Flanagan to general manager of the Texas operating division of the United Gas Corporation, in charge of firm's far-flung retail gas sales in the state, was announced today by President N. C. McGowen.

John C. Flanagan

At the same time Mr. McGowen announced retirement Oct. 1 under United's retirement plan of J. V. Strange, of Houston, who far the past 17 years has been vice president and general manager of the operating division.

Mr. Flanagan, a United vice president since early 1946, joined United in 1929 and from 1930 to 1940 lived in Houston while serving as assistant to the president. He moved to Shreveport in 1940 and in 1946 moved back to Houston after his election as vice president and appointment as assistant general manager of the operating division.

Mr. Strange, one of the gas industry's best-known executives, went into the utility business 41 years ago on the West Coast. He came to Houston in 1930 as vice president in charge of distribution for several companies which later became the United Gas system.

## New Compressor Station for United Natural Gas Co.

Chemical Plants Division of Blaw-Knox Company has received a contract from the United Natural Gas Company, Oil City, Pa., for the erection of a compressor station near Ellwood City. The new station will have seven compressors and will help assure a continuous flow of natural gas. Included in the award are the foundation, erection of compressor and auxiliary buildings and installation of piping and equipment.

## Porter with Tennessee Transmission

A. Lynn Porter has joined Tennessee Gas Transmission Company as Internal Auditor. He was formerly with Magnolia Petroleum Company of Beaumont; Frazier and Torbet in Houston; and Boney and Porter in Houston.

He is a member of the Texas Society of Certified Public Accountants, American Institute of Accountants, and the National Association of Cost Accountants. He is a native of Belton, Texas, received his B.S. Degree from Texas A & M.

## Syntron Company Establishes Montreal Sales Office

D. G. Black, General Sales Manager of the Syntron Company, of Homer City, Pa., announces the establishment of a branch sales office in Montreal at 4695 Sherbrooke Street, West, under the supervision of Mr. C. F. A. Gray.

This office will provide better sales and engineering service to meet the increased demand for Syntron Vibratory Material Handling and Construction and Maintenance Equipment in Quebec and the Maritime Provinces, and will relieve the already established branch sales office at 2655 Bloor Street in Toronto under the direction of George Dranfield, of the burden it has been carrying.

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## Is Natural Gas Being Sold Too Cheap?

This question was pointed up forcibly recently in testimony given during a hearing before the Michigan Public Service Commission by Mr. Ronald Herringshaw, who appeared as a witness on behalf of the Consumers Power Company of Michigan in connection with an application of Panhandle Eastern Pipe Line Company for authority to construct gathering lines in Howell field.

The effect of Mr. Herringshaw's testimony was that the shortage of natural gas is due, among other causes, to the fact that the gas is being sold too cheaply in comparison with the increasing prices obtained for coal and fuel oil for house-heating purposes, and that as a result the demand for more gas as a premium fuel is increasing beyond all estimates heretofore made.

The following excerpt from his testimony is a most revealing observation:

*Question:* What really brings about this shortage in supply of natural gas, Mr. Herringshaw, in your judgment?

*Answer:* Well, in my judgment, there are quite a number of factors that enter into the shortage of natural gas supply. We must remember that during the war years, there were excessive demands put upon gas distributing companies, particularly for industrial gas that was used for war purposes.

I know that in the Consumers Power Company we sold large amounts of industrial gas to industries that were making war produces, which meant that there was just that much more gas being taken out of the storage field. There were restrictions—put on by the Federal Government—as to building new extensions. Steel was not available to build new pipelines.

So, at the end of the war, we found—many of the companies found—themselves with depleted gas fields, or partly depleted gas fields, fields that were depleted more than they would have been depleted in normal times.

The pipeline companies, during the war being unable to enlarge their systems because of war restrictions found themselves faced with an inadequate capacity. And I think it is a well-known fact that since hostilities ceased, there has been a steel shortage, and it is next to impossible at the present time to get steel to add to the capacity of your pipelines, or make the necessary extensions.

I know, as an example, the Michigan Gas Storage Company wants to run a pipeline from the storage areas down to a point south and east of Chelsea (Michigan), a distance of about 150 miles. We would like to put in a 24-inch pipeline there. We can't get that pipe until 1949. That is the earliest we have been promised delivery.

So that is the situation that you find yourself in—that all your gas companies find themselves in, and particularly the pipeline companies find themselves in that position.

Now, there is another important factor that I don't believe the people have given enough thought about, and that is the fact that we find ourselves faced today with 10 and 11-cent oil per gallon.

*Question:* Fuel oil, you mean?

*Answer:* Fuel oil for heating houses. We hear of the price of coal going up. The price of coal goes up a dollar, a dollar and a half a ton. That is true at the present time.

Many of the gas companies find themselves in a position where they are selling gas that is non-competitive with coal, non-competitive with oil, and selling in a competitive market, and it might be said it is being sold too cheap under the present conditions.

So naturally everybody wants natural gas, and everybody is going to cry for natural gas. And even this winter you will find people are going to say, "11-cent oil"—they are going to light the oven in their stoves, they will burn the gas that would be at a more favorable price than the 11-cent oil.

Now, those are some of the conditions that bring about the shortage of natural gas all over the country, not alone in Michigan.

## Gas Technology Short Course

Definite planning for the Third Annual Short Course in Gas Technology to be held at Texas A & I College next spring will begin with a meeting at Kingsville in November of the administrative committee.

Meeting with Dr. Dotterweich, who is director of engineering at A & I, will be Robert M. Hutchison, of the Houston Natural Gas Corporation, Houston; George E. May, of New Orleans Public Service, Inc., New Orleans; W. C. McGee, of the Tennessee Gas and Transmission Company, Houseton; C. A. McKinney, of the United Gas Corporation, Houston; and Robert R. Suttle, managing director of the Southern Gas Association, Dallas. The association sponsors the short course.

The course has been set for the week of May 31. Committee members will tabulate results of questionnaires mailed to those attending last year's meeting in regard to subject matter to be discussed.

## M. F. Murphy Elected V.P. Public Service of No. Illinois

Morgan F. Murphy, assistant to president Britton I. Budd of the Public Service Company of Northern Illinois, has been elected a vice-president of the utility.

A native Chicagoan and an alumnus of De La Salle Institute and Northwestern University, Murphy began his utility career 22 years ago when he started work as a stenographer.

He became secretary to the president of Public Service in 1935 and was named assistant to the president four years ago.

## Cooper-Bessemer Elevate Gehres and Boyer

In recognition of their outstanding record in the development of revolutionary improvements of its products in recent years, The Cooper Bessemer Corporation of Mount Vernon, Ohio, and Grove City, Pa., announced the elevation of H. A. Gehres and Ralph L. Boyer.

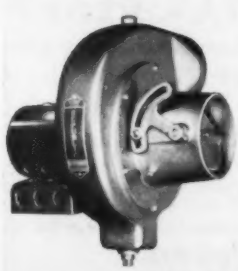
Mr. Gehres has been named Executive Vice President by the Cooper-Bessemer Board of Directors and Mr. Boyer's new title is Vice President and Chief Engineer.

Within the last three years, the company's engineering division, under the direction of these two men, has come forward with a nlmber of major developments in the engine and compressor-building field.

Mr. Gehres began his service with the company in 1910 when it was known as the C. & G. Cooper Company. Mr. Boyer joined Cooper-Bessemer in 1926 as Diesel engineer.


THE REPUBLIC *SHURE-VENT* SYSTEM

**"... the chimney in a carton"**



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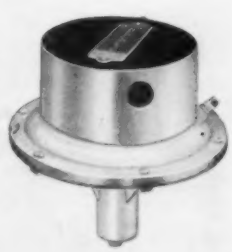

SHURE-VENT CONTROL

## E. L. Hall to Direct A.G.A. Testing Laboratories

E. L. Hall

Edwin L. Hall, Coordinator of Gas Production Research and Secretary of the General Research and Planning Committee of the American Gas Association has been appointed Director of the American Gas Association Testing Laboratories at Cleveland and Los Angeles as of November 1st, according to a joint announcement made recently by H. Carl Wolf, Managing Director, A.G.A., and Arthur F. Bridge, Chairman of the Laboratories Managing Committee and Vice-President and General Manager, Southern Counties Gas Company, Los Angeles, Calif. Mr. Hall will succeed R. M. Conner who is resigning from active duty as Director because of ill health. Mr. Conner will be retained in the capacity of Laboratories Consultant.

Mr. Hall joined the American Gas Association in May, 1945, as Coordinator of Gas Production Research. In August, 1947, he was appointed Secretary of the General Research and Planning Committee under the new and enlarged program now being launched by the gas industry. The new research program calls for the expenditure of $1,800,000 for general, technical and domestic gas research over the next three years.

R. M. Conner

The A.G.A. Laboratories Managing Committee accepted Mr. Conner's resignation with extreme regret, Mr. Wolf and Mr. Bridge stated. Mr. Conner was instrumental in the founding of the Testing Laboratories in 1925. Previously he directed the research work of the Portland Gas Light and Coke Company, Portland, Oregon, and in 1924 he was awarded a Gold Medal by the Pacific Coast Gas Association for his achievements in the field of gas research and gas appliance testing codes. With the establishment of the Testing Laboratories, the gas industry became the first self-regulated industry setting up standards and requirements for safety, durability and dependability for the protection of purchasers of gas appliances and equipment. In 1941 as Director of the Laboratories, he was awarded the Walton Clarke Medal of the Franklin Institute.

Mr. Conner has been the only Director since the establishment of the Testing Laboratories. In the twenty-two years he has served, more than thirty-one thousand performance tests have been conducted by the Laboratories at Cleveland and Los Angeles. The Laboratories established a record of excellent performance during the war and Mr. Conner was presented with a Certificate of Recognition by The American Standards Association for the Laboratories contributions in the development of war standards.

## McMullin Becomes Asst. Gen. Mgr. Of Gas Consumers Association

Frank B. McMullin has joined Gas Consumers Association as Assistant General Manager. He is a member of the AGA's Committee on the Costs of Competitive Services, serving as chairman of the subcommittee on Comparative Tests of Commercial Cooking Equipment. He was formerly with the Philadelphia Gas Works Company as a Sales Department Engineer.

F. B. McMullin

Mr. McMullin served five and a half years in the Army as a Major and Lieut. Colonel in World War II, his final assignment being Battalion Commander of the 99th FA Battalion of the First Cavalry Division. He is still active in Military Affairs as Lieut. Colonel, Operations Officer of the 28th Division Artillery of the Pennsylvania National Guard. He graduated from the William Penn Charter School of Philadelphia in 1927, received his B.A. in Economics from Cornell in 1931 and his E.E. from the same University in 1932.

## A. F. H. Scott with Burkay Co.

The Burkay Company, Toledo, Ohio, announces the appointment of Allison F. H. Scott as Vice President in Charge of Sales of their Heating Products Division. Mr. Scott's early association in the heating business has been with the American Radiator Company, New York, and Hoffman Specialty Company, Waterbury, Connecticut.

Mr. Scott is bringing a broad experience in heating to augment Burkay's line of gas designed equipment.

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For purifying Manufactured Gas. How many tons do you need for quick delivery?
I have presently 2000 tons ready for immediate shipment.
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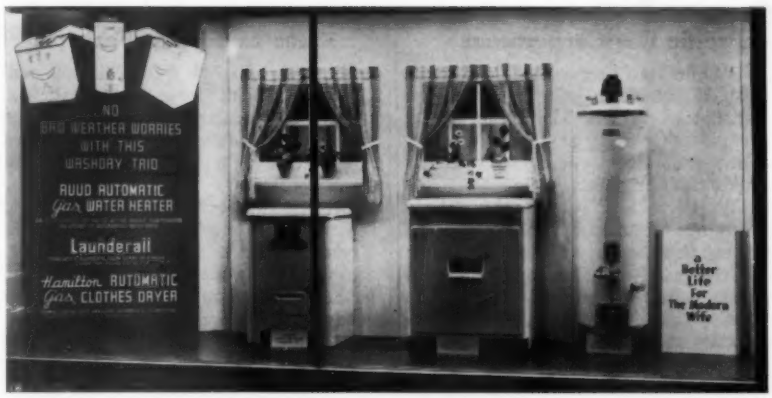
Now has the "Z" handle for easy manipulation. When locked in place it holds. Stopper cannot slip. Gas cannot pass. Adjusted in 30 seconds.
Ask for circulars on this and other distribution equipment.
*Nearly a half century of service to the Gas Industry.*
Safety Gas Main Stopper Co.
523 Atlantic Avenue, Brooklyn, New York

## Ruud Manufacturing Co. Holds Sales Conference

The first post-war sales conference of the Ruud Manufacturing Company, Pittsburgh, Pa., makers of gas water heaters, was held in Kalamazoo October 2, 3, and 4. Coincident with the sales conference was the celebration of the fiftieth anniversary of the incorporation of the company and the dedication of the new Plant No. 2 in which Ruud's new post-war Monel tank is made.

Nearly a hundred zone and district managers attended the meeting which was devoted to a study of new manufacturing methods, new 1948 products, sales and advertising. Speakers included R. H. Lewis, president, Halvard Lintvedt, manager of the Kalamazoo plants, G. M. Rohde, Jr., New York state zone manager, John M. Lyle, chief engineer, H. B. Kivlan, field service manager, Frank A. McFerran, general sales manager, and M. M. Scott, vice-president.




Window display used by the Birmingham Gas Company. A washer, dryer, and water heater are featured in this display which shows effectively the modern equipment used today in the automatic home laundry.

## Suburban Propane Gas Corp. Appoints J. N. Good Dist. Mgr.

Joseph N. Good of the Suburban Propane Gas Corporation, Whippany, N. J., has been promoted from Assistant to Manager of District to District Manager for the Bound Brook area. This was announced recently by Mark Anton, president of the corporation.

Mr. Good, a graduate of Carnegie Institute of Technology in mechanical engineering, has been associated with the liquefied petroleum gas industry almost since its inception, having been affiliated with the Phillips Petroleum Company at Maywood, Indiana, in 1931 and later at Hudson, Ohio.

He successively served as district manager in Derby and at Niantic, Connecticut, before transfer to the general offices at Whippany.

Suburban Propane Gas Corporation assumed a nine-state propane gas marketing area of Phillips Petroleum Company when it was incorporated in 1945.

## New "Heat for Metals" Booklet

A booklet entitled, "Heat for Metals," has just been published by Surface Combustion Corporation, Toledo, Ohio, which is descriptive of the company's broad activities in metallurgical research, and the designing and manufacturing of heating equipment for the metal producing and working industries.

The booklet consists of thirty-two pages, attractively printed in red and black. Subjects include the latest developments in heating equipment for steel mills, the history of the development of gas chemistry and heat treatment; prepared gas atmospheres and heating equipment applications to processing such as gas carburizing, carbon restoration, atmosphere hardening, gas normalizing and annealing, gas cyaniding, gas quenching, gas malleableizing, and atmosphere heating for forging. In addition, standard industrial furnaces, and burner systems and equipment are described.

"Heat for Metals" booklet is a ready reference on modern heat treating methods and equipment.

Copies are available only by request from the Surface Combustion Corp., on your company or professional letterhead.

## Lincoln Foundation Appoints Editor-in-Chief for New Book "Design for Welding"

Dr. E. E. Dreese, Chairman of the Board of Trustees of The James F. Lincoln Arc Welding Foundation, announced October 1st the apointment of Professor R. S. Green of the Department of Industrial Engineering of Ohio State University as Editor-in-Chief of the Foundation's new book "Design For Welding."

"Design For Welding" will be a comprehensive survey of the latest developments in the science of welded design in every major field of industrial operation. It will be based on the outstanding papers submitted in the Foundation's $200,000 Design - For - Progress Award Program which closed June 1947, the results of which will be announced in the near future. In addition to forming the basis for the book, the award papers will be bound and placed in the A. F. Davis Welding Library at Ohio State University where they will be available for general use by industry.

---

**Aftercoolers.** The benefits, principle and application of aftercooling, and a complete description of a line of Type "PL" and "M" aftercoolers are fully covered in a new 16 page, 2-color bulletin Form 3014B recently published by Ingersoll-Rand, 11 Broadway, New York 4.

Several pages illustrate the various 1-R aftercoolers with cross-sectional views and description of their operation. One spread is devoted to a typical compressor plant set-up, showing a photograph of a complete layout, including compressors, intake filter, piping, aftercooler, receivers, headers and control panel. A selection table for choosing the proper size aftercooler for specific compressor output is also included in this bulletin.

This practical presentation should be of use to anyone operating or installing air or gas compressor units. Additional information may be obtained by writing Ingersoll-Rand, 11 Broadway, New York 4, N. Y., or any of its branch offices. Ask for Form 3014-B.

## A CORRECTION

In the 1947 edition of American Gas Handbook, now in our reader's hands, the following notation should be made on pages 174 and 175. The caption beside Figure 1 applies to Figure 2 on page 175. Both charts refer to insulating firebrick.

**Prompt Shipment of NORWALK GAS CONTROLS from 12 Factory Branches**

- SAN FRANCISCO
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### A. E. Wastie Joins Staff of Pacific Gas Corporation

The Pacific Gas Corporation, specialists in liquefied petroleum gas, announce the appointment of Arthur E. Wastie to its sales engineering staff as assistant to H. W. Townsend, vice-president and Francis E. Drake, chief engineer.

Mr. Wastie joins PGC after four years with Phillips Petroleum Co., where he served as sales engineer and district manager in charge of industrial and utility installations, contracts and fuel supply. His new duties will deal with LP-Gas application, sales and engineering for industrial and gas utility companies.

Earlier, Mr. Wastie spent ten years with the Brooklyn Union Gas Company. He holds the degree of Mechanical Engineering (Villanova '32) and is a registered professional engineer in Massachusetts.

### Clark Bros. N. Y. Office Changes

Clark Bros. Co., Inc., of Olean, N. Y., announce several organization changes in their New York City office at 122 E. 42nd Street.

T. F. Hudgins, formerly Export Manager, has resigned to enter business for himself in Dallas.

R. R. McCartney, while still retaining his post as Clark's New York District Manager, assumes Mr. Hudgin's duties as Export Manager.

Robert Spears, for the past ten years a member of Clark Bros., Olean organization, has been assigned to Technical Service in the New York office.

### Stacey Manufacturing Co. Honors Two Executives

Edw. J. Baechle, Execuitve Vice-President, and Frank O. Pandorf, Vice-President in Charge of Engineering of The Stacey Manufacturing Company, were guests of honor at a surprise dinner given by A. A. Ranshaw, President of the Company, on October 14, 1947, in celebration of their many years of service, Mr. Baechle having completed forty years and Mr. Pandorf thirty-five years with the Company.

Mr. Ranshaw, on behalf of the Board of Directors of the Company, presented them with watches, suitably engraved, commemorating the occasion.

### New Bryant "Consolaire" Has Important Features

The new Bryant Consolaire, a unique gas-fired radiant front circulating heater, made a spectacular premier public appearance recently when it arrived via American Airlines Flagship at the Nashville, Tennessee, airport.

Bearing the Serial Number 1, the 25,000 btu model Consolaire was flown from Bryant Heater's Tyler, Texas, plant to Nashville to arrive in time for its featured public introduction in full-page color advertising in Nashville newspapers.

The new circulator offers a new design in its enameled steel radiant front. Its operation assures complete circulation of air and overcomes cold floor conditions. The three smaller sizes may be installed unvented, and all models are available for operation on natural, manufactured, LP or mixed gas.

Not only an excellent auxiliary unit to central heating systems in cold climates, the Consolaire is designed to be used as the complete heat source for homes in areas where the weather is less severe. It can be installed singly or with two or more units arranged throughout the house to constitute the complete gas heating system.

### Pittsburgh Consolidated Coal Appoints Research Chemist

Irving H. Welinsky, Ph.D., originally of New York and recently of Wilmington, Del., has been appointed research chemist by the Research and Development Division of Pittsburgh Consolidated Coal Co., and assigned to general research for the division. Dr. Welinsky is 35 years old and received his doctor's degree (in physical chemistry) at New York University in 1938.

Jack F. Chapin, formerly of Reading, Mass., has been appointed chemical engineer and assigned to operational work on the coal gasification pilot plant. Mr. Chapin, 31, was educated at Massachusetts Institute of Technology, where he received a master's degree in chemical engineering.

William E. Lough, formerly of Morgantown, W. Va., has been appointed chemical engineer and will be employed on the coal gasification pilot plant. Mr. Lough is a recent graduate of West Virginia University, where he received a degree in chemical engineering.

### ALFRED I. PHILLIPS

Alfred I. Phillips, consulting gas engineer, New York, died suddenly October 6th. Mr. Phillips graduated from Massachusetts Institute of Technology, Boston, Mass., in 1910, and immediately went with the United Gas Improvement, Phila., Pa., until 1917. In 1918 he was appointed Associate Gas Engineer of the Bureau of Standards, Washington, D. C.

Alfred I. Phillips

In 1921 he went with the American Gas Association as Service Engineer. He started consulting practice in New York in 1923, which continued up to the time of his death. From 1934 to 1944 he was Consulting Editor of the AMERICAN GAS JOURNAL.

Mr. Phillips was active in AGA work and served on a number of committees. He specialized in gas company rates.

### J. E. ROBB

Joseph E. Robb, 51, associated with the Minneapolis-Honeywell Regulator Company for 21 years, died in Kansas City, Mo., September 28.

Mr. Robb was widely known in the gas heating industry, and served as Honeywell's special home office representative in that field for the western states. He was born in Chicago.

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in purification
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**High Pressure**
RANGE:
Cu. Ft. of Gas Per Hour—100-10,000 M
Diameter of Pipe—Inches ¾-30
Difference in Absolute Pressure—Lbs. per sq. in., 1-500
Sum of Absolute Pressures—Lbs. per sq. in., 2000-20
Specific Gravity—1.5-.35
Length of Pipe—Feet 100-5000
Length of Pipe—Miles 1-250

**Low Pressure**
RANGE:
Cu. Ft. of Gas Per Hour—10 to 500 M
Pipe Diameter—¾" to 48" (including standard and actual weight up to 4")
Pressure Loss—Inches .01-10
Length of Pipe—Feet 30-30,000
Specific Gravity—1.5-.35
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## WANTED

### Service Mgr. Wanted

WANTED — Service Manager — experienced in handling installation and service work and personnel—accept full responsibility of department and its efficient operation. Our personnel have been informed of this advertisement. Write Box 174, c/o American Gas Journal, Inc., 53 Park Place, New York City 7, giving experience and other details.

### Gas Maker Wanted

Man for making carburetted water gas. Immediate work in small gas plant in the East. Address Box 176, c/o American Gas Journal, 53 Park Place, New York City 7.

### Position Wanted

Engineer, M.S. degree, 45, married, long experience in distribution, sale of appliances, installation and service work, also managerial and commercial. First class references. Seeks promising position. Write Box 178, c/o American Gas Journal, Inc., 53 Park Place, New York City 7.

**Industrial Air Compressors.** Bulletin E-219 of Davey Compressor Co., Kent, Ohio, contains mechanical data and specifications on complete Davey departmental units of 60-105-160-210 and 315 c.f.m. capacities. It also lists bare compressors suitable for installation with customers' motors or as replacement machines.

### Equipment Wanted for Meter Repair Shop

Wanted for early delivery, Two Meter Provers, Water Testing Machine, Testing Gauges, and miscellaneous equipment. Used material acceptable. Address Box 175, c/o American Gas Journal, 53 Park Place, New York 7, N. Y.

## FOR SALE

Gas Heating Contracting concern for sale. Metropolitan N. Y. Area. Address replies Box 177, c/o American Gas Journal, 53 Park Place, New York City 7.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, of American Gas Journal, published monthly at East Stroudsburg, Pa., for November, 1947.

State of New York )
County of New York ) ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared S. G. Krake, who, having been duly sworn according to law, deposes and says that he is the Managing Editor of the American Gas Journal and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations.

1. That the names and addresses of the publisher, editor, managing editor and business manager are: Publisher, American Gas Journal, Inc., 53 Park Place, New York City; Managing Editor, S. G. Krake, 53 Park Place, New York City; Business Manager, H. T. Matthew, 53 Park Place, New York City.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) S. G. Krake, 53 Park Place, New York City.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom said trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is ——. (This information is required from daily publications only.)

S. G. KRAKE,
Managing Editor.

Sworn to and subscribed before me this 29th day of September, 1947.

(Seal.) MARY E. KELLEHER.

(My commission expires March 30, 1948.)

(Continued from page 37)

similar objective. The appliances we sell today will determine to a great extent the public acceptance of our product in the highly competitive era ahead.

The gas utility operator recognizes in the manufacturer of appliances and equipment his strongest ally. Without him we could not at all times meet our solemn obligation to "render safe and adequate service at the lowest possible rates." This ideal of service has sparked the efforts of our manufacturers and in this common objective we find the key to our units. It is a challenge to all of us to maintain this understanding relationship which has been built up over the years and is the envy of other industries.

Our convention's guest of honor, R. W. Gallagher, speaking two years ago at our annual meeting, said:

**"Essentials of leadership are awareness of the deep aspirations of people and ability to provide constructive suggestions as to how those aspirations may be realized. Leadership will not be granted to those who are content simply to point out the difficulties and flaws in the proposals of others. If today's managers of private enterprise are to justify their positions, they must conceive their duties in broader terms than simply in the production of goods. They must have a sense of public responsibility; must see their function in society from a modern viewpoint, and must assume active roles.**

**"It is not enough merely to adapt ourselves to changed conditions. We ourselves must help change conditions; we ourselves must find and show the way."**

### Engineering

We all recognize the supreme importance of engendering good will among our employees, customers and security holders. This, however, does not dispose of all our obligations. There is a larger and much more important responsibility, namely, the continuance of the industrial system under which this nation has prospered and with which all of us together must stand or fall.

Like other national industrial undertakings, if we do not deal wisely with our problems while they are ours to deal with, we may drift on until certain forces compel a solution in ways which may spell disaster for us. In other words, if our industry fails to keep pace with national thinking and changing public policy there should be little criticism if others seize the initiative which we fail to assume.

It is crystal clear, therefore, that we cannot sidestep the responsibilities that free competitive enterprise has entrusted to us. If we exercise proper leadership there will be little temptation for others who support conflicting philosophies to take the helm and control our destinies. We must solve our problems with our own resources or accept the inevitable consequences.

### Community Responsibility

This leads me to another responsibility long recognized and accepted by enlightened utility management—that of community responsibility. Our industry, while national in scope and international in influence, is entirely local in character and is dependent upon local support and prosperity to thrive. In this respect every company is like the butcher, the baker and the candlestick maker.

The utility company is interested in seeing that the community is prosperous, well governed and well served, for the company's prosperity and growth are intimately bound up with that of the community. It is obligated to aid and support those civic and community undertakings which have for their purpose improvements in social conditions and living standards, and in industrial and business development.

No discussion of our responsibilities in a changing world would be complete without consideration of that great body of loyal employees which constitutes one of our greatest assets. While generally speaking we have enjoyed good labor relations, no industry's personnel could be insulated against the unrest which is stirring the great mass of workers today. It is only natural in a period of rising prices, economic dislocation and shifting social philosophies that our employees should be concerned about their position.

Management's responsibility to its employees consists in treating them as partners in the business, seeing that they are well paid, have good working conditions, are taken care of in sickness and old age, and have steady employment. Unless a company enjoys good employee relations, unless the employees are happy and content, the company's operations and public relations will suffer, costs will increase and service be impaired.

It is obvious, therefore, that skill in the basic arts of human cooperation will pay rich dividends. In the words of Prof. Schell of M. I. T.: "The surest sign of managerial proficiency in the days ahead will be the degree to which the good will of all parties at interest is safeguarded and increased."

By this I do not mean to infer that the labor-management relationship is a one-way street. There are obligations and responsibilities on both sides and employees will do well to recognize that their prosperity is inextricably bound up with the soundness and progress of the companies for which they work.

The factors I have cited serve to direct our thinking to some of the responsibilities of management in dealing with the forces of the postwar world. There are many other responsibilities which time has not permitted me to mention but which you know as well as I do. What we must bear in mind, however, is the fact that American business won its position of leadership by its willingness to push out into uncharted territory, to measure with skilled judgment the risks connected with such enterprise, and to move ahead with daring and vigor. That was and is the pathway to human achievement.

Summing up our position today, it is obvious that we are in a transitory period of economic unbalance. Supply is not yet balanced against demand. Revenues are not balanced against costs. Yet, just as surely as there are definite, discernible reasons for this situation, there are means with which to bring about the balance so necessary to progress.

The basic elements of our country are stronger than ever before. Those of the gas industry are stronger than ever before. The opportunities ahead are greater than ever before. All that is needed is for every individual to put forth his best effort in solving the problems immediately ahead and for management to assume the full responsibilities of leadership. Acceptance of those responsibilities is the essence and core of our American system.